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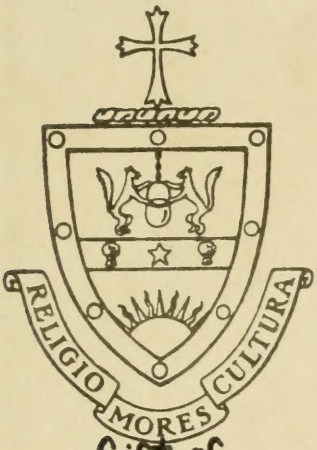

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Commonwealth of Pennsylvania

REPORT

OF THE

Department of Mines

OF PENNSYLVANIA

PART I---Anthracite

1914

HARRISBURG, PA.:
WM. STANLEY RAY, STATE PRINTER
1915

VIRTUE
LIBERTY AND
INDEPENDENCE

LETTER OF TRANSMITTAL

Department of Mines,
April 1, 1915.

To His Excellency, Martin G. Brumbaugh, Governor of Pennsylvania.

Sir: In compliance with the Act of Assembly of April 14, 1903, I beg to submit herewith, for transmission to the General Assembly, the report of the Department of Mines for the year ending December 31, 1914. Part I covers in detail the operations in the twenty-one Anthracite Districts, Part II the operations in the twenty-eight Bituminous Districts, as returned by the Inspectors. Observations and suggestions are also offered relative to mining subjects.

Respectfully submitted,

JAMES E. RODERICK,
Chief of Department of Mines.

REPORT

OF THE

DEPARTMENT OF MINES

INTRODUCTION

The coal production of Pennsylvania for the year 1914 was 237,074,171 net tons, of which 91,189,641 tons were anthracite and 145,884,530 tons bituminous. The coke production was 17,164,124 net tons. Both coal and coke showed a reduction from the high record of 1913. The decrease in the anthracite output was 437,323 tons, in the bituminous, 27,081,129 tons, and in coke, 7,554,114 tons.

There was a notable decrease in the number of accidents in both regions. The anthracite fatalities numbered 600 as against 624 in 1913; the bituminous numbered 413 as against 611. The non-fatal accidents in the anthracite region numbered 1,014 as against 1,125 in 1913 and in the bituminous region 963 as against 1,082. Notwithstanding the reduced tonnage, the number of employes was considerably greater than in 1913, the reduction in tonnage being due to a reduction in the number of days worked. The anthracite region reported 180,899 employes as against 175,310 in 1913; the bituminous reported 196,038 as against 189,909.

The trade in bituminous coal was generally disappointing as a result chiefly of the depression that prevailed throughout the country in nearly all branches of industry.

At the outbreak of the European war, coal shippers had hopes that a large market might be opened up to them, but no beneficial results followed. German and Austrian ships were driven out of the market and the English government chartered all the tonnage it could possibly reach, making it impossible to obtain carriers for American coal, except at rates so high as to be prohibitive. The expectation of trade with South America was equally disappointing. The South American merchant requires a long period of credit, in many cases three or four months, often with a demand for renewals, and this condition had a most discouraging effect upon the American shipper.

Before the export of coal can be made a permanent and paying part of the trade, it will be necessary for the coal interests to get together and exploit their wares by a combined effort.

What is needed is cohesion and a practical unanimity of opinion among the shippers; internal disagreements must be avoided. When this condition is reached and proper representatives found, satisfactory results will, no doubt, be obtained. The Latin-American Trade Committee, appointed by the Secretary of Commerce, has recently made a recommendation in support of this suggestion. No doubt an association of Pennsylvania operators and sales-agencies, having both steam and locomotive coals suitable for export, could maintain a consolidated foreign sales-agency at a small expense to the individual members. One representative could be designated to look after the steam coals and another the locomotive and gas coals, the maintenance expense to be divided in proportion to the shipments of each company. The Coal Age of November 21, 1914, summarizes the advantages of this plan as follows:—

"1. It would relieve the pressure on the domestic markets to take more coal than they actually need; or, in other words, the plan would take care of any over-production, which is fast becoming a vital question.

2. It would do away largely with the handling of coals by competitors or their business associates, something that has always been a detriment to coal and its sale.

3. It would result in maintaining better average prices for coal, as a natural result of securing wider markets and an increased demand.

4. By increasing the export of coal, it would help to throw the balance of trade in our favor.

5. It would give the mines steadier operation, which means reduced cost of operation.

6. It would also reduce the cost of selling the coal.

7. It would mean a greater development of the coal fields, and make easier the securing of capital for improvements and development.

8. It would bring about a closer business relationship between operators and agencies, and tend to stop price cutting.

9. It would enable the railroads to give better car service, by keeping a larger percentage of their equipment on their own lines, besides tending to reduce the cost of transportation.

10. The members of such an association would obtain a wider knowledge of foreign-trade conditions, coals and transportation, and would learn the value of properly preparing and mining their coal.

11. It would have a tendency to reduce ocean freights, owing to the movement of a heavier tonnage and a steadier demand for ships, thus turning the currents of trade our way.

12. The question of foreign credits and banking facilities would be more easily handled.

Finally, it would assist this country in getting into closer touch with other countries, by learning to know other people, their needs and customs, a thing that cannot but broaden our influence in world politics, as well as make us better fitted to handle our own affairs."

Towards the close of the year there were some signs of improvement in certain industries, but no great expectations are entertained for the immediate future. The great abundance of Southern coals during the year seriously affected the bituminous output, but the exceptionally clean character of the Pennsylvania coal, as compared with some of the Southern coals, leads to the hope that there may soon be an increased demand for the Pennsylvania product. The Navy Department during the year awarded several contracts for Pennsylvania coal in competition with the best Pocahontas and New River coals.

The causes that affect the bituminous trade have sometimes but little effect on the anthracite for the reason that bituminous coal is chiefly used by industrial concerns, while anthracite is to a great extent a domestic commodity. For this reason the anthracite trade

during 1914 was fairly active and the output approached very nearly to that of 1913. The anthracite region was also free from labor troubles, and the only cause that interfered with the production was the excessive drought. Just what effect may be felt by the trade in the future from the recent decision of the Public Service Commission in reducing freight rates on anthracite to Philadelphia it is difficult to forecast. The primary result of this action of the Commission, and also of all legislative enactments affecting the industries of the country, is to unsettle trade and to a certain extent check its progress until adjustment to the changed conditions is accomplished.

WORK OF THE MINE INSPECTORS

During the year they spent 3,560 days inspecting mines; 153 days inspecting machinery and plants; 370½ days investigating accidents; 87 days attending inquests; 1,172½ days at office work; 13 days inspecting maps and plans; 339½ days in consultation on mining matters; 2 days in consultation on legal matters; 116½ days traveling on duty; 122 days on sick list; 125 days legal holidays; 115 days attending court; 19 days at mine fires; 165 days on Mine Foremen's Examining Boards; 28 days attending Mining Congress; 21 days attending funerals; 6 days on account of deaths in families; 5 days sickness in families; 134 days on vacation; 22 days on private business; a total of 6,576 days, or 313 days a year for each Inspector.

MINING AND HUMANITARIANISM

It seems like a far cry from coal beds to flower beds, and the imagination balks at the attempt to bridge the chasm between two things so widely separated. The apparent extravagance of speech, however, has its justification in the marvelous transformation that has taken place in recent years in the social condition and physical environment of the man who works underground.

The mining of coal is not a subject to excite the fancy or arouse enthusiasm. Rather does it suggest to the mind a picture of gloom and grime, the characteristically distinctive feature of which is a background of danger and death set in sordid, unhealthy and desolate surroundings. This unattractive picture was true as illustrative of the conditions in the past, and is still, unfortunately, true in many cases today, but a more pleasing portrayal may now be made regarding many of the great coal centers of the State. For along with the remarkable progress in the practical and material side of coal mining there has come an intelligent and successful effort to better the lot of the miner both inside and outside the mines. A genuine humanitarian spirit has been effectively at work, not only to throw around the occupation every possible safeguard and protection, but to give to the domestic and social life of the workers a new interest by

improving the living conditions. This is revealed in the character of the homes, in the comforts and conveniences with which they are supplied, and in the general appearance of neatness and cleanliness that marks the present communal life in contrast with the disagreeable and repellant aspect of former years.

Many operators recognizing that something was demanded of them beyond the physical protection of their employes while in the performance of their duties, inaugurated reforms in the living conditions, and this movement has steadily continued, increasing in scope and broadening in character from year to year, until today many mining communities compare favorably with other communities that have had much greater natural advantages.

In taking a general view of what has been accomplished for the safety, health and happiness of the mining population, the work may be classified, first, as physical, having reference to the safety and protection of the miners from accident and discomfort while in the performance of their duties, and, second, as sociological, having reference to the domestic affairs, the social, intellectual and moral condition of the community. In addition to the general descriptions given under these headings, brief separate mention is made of first aid and rescue work, relief fund systems, hospital facilities and educational advantages.

IMPROVEMENTS IN PHYSICAL CONDITIONS

Under this classification come State mine inspection, mine laws, mine rules, first aid work, rescue work, hospitals, relief funds and the other auxiliaries adopted or established to advance the cause of safety and health in and about the mines and to afford assistance to the injured and dependent.

When the first State mine inspector, forty-five years ago, assumed, under the law, to look after the safety and health of the workers he was performing a work of humanitarianism, and this work has increased until today the State has fifty-five trained and experienced inspectors giving constant attention to mining conditions.

The mining laws in force have all been conceived and enacted with the hope that they might lessen the dangers and relieve the hardships of the occupation. Operators and mine workers, co-operating with the State government, have from time to time added to the protective features of the laws until at present they cover in connection with the comprehensive mine rules, almost every conceivable condition of danger incident to mining.

In addition to these protective features there have been provided for the men comforts that were unthought of a few years ago. Emergency hospitals for the immediate care of injured persons have been established at most of the mines and are equipped with all the practical aids and accessories, such as stretchers, reclining chairs, tables and in many cases hot and cold running water and telephones. Where practicable, they are heated with steam and lighted with electricity. They are well ventilated and in many instances the walls are whitewashed and the floors cemented. These institutions fill an important place in conjunction with the work of the first aid corps.

Wash houses with modern equipment have been provided for the use of those who wish to remove the evidence of their toil and change

their clothes before going home. Mess rooms, a recent innovation and one that will no doubt be greatly appreciated, have been introduced by some of the more progressive operators and they will unquestionably be a source of comfort as well as an aid to sociability.

IMPROVEMENTS IN SOCIOLOGICAL AND DOMESTIC CONDITIONS

Under this classification come the improvements in and about the homes, consisting of better houses, better streets, up-to-date schools and kindergartens, public playgrounds and other essentials of domestic comfort and progress.

While the improvement in the conditions existing at the mines has been most marked and stands as a monument to the kindly interest and goodly intent of the operators and the State administration, the changes that have been wrought in the living conditions are even more notable and deserving of still greater commendation, for they are the outcome of purely philanthropic promptings and are the evidence of an honest desire to add to the sum of human happiness.

A visit to one of the particularly progressive towns in the bituminous region will upset most preconceived ideas regarding mining communities. The visitor will see good streets, well lighted and ornamented with shade trees, fine sidewalks, modern school buildings, including a kindergarten department, a nicely appointed social room with books, periodicals, billiards and pool, an up-to-date hospital under the supervision of a capable staff of physicians and nurses, domestic science and sociological departments, playgrounds and moving picture theatres.

The general scope of the reforms and improvements can best be illustrated by showing somewhat in detail what has been accomplished by one of the most prominent companies in the bituminous region. To quote from the report as made to the Department of Mines:

"The company, under the influence and direction of the president, long ago adopted the slogan 'Safety the first consideration,' and the question of safeguarding the lives and health of the 18,000 employes and their families at the 65 operating mines has always been deemed a most important one. The company has adopted every safety device possible for the prevention of accidents, it provides relief in case of temporary or permanent disability or death due to accident, and compensates the faithful employe when he becomes incapacitated. It also increases the efficiency of the workman by providing the best conditions possible for earning the maximum wage.

The extent of the work in its various branches cannot be told in detail, as the space is limited. The company, however, years ago made a very careful and thorough investigation of all the mining methods and safety measures in use in the coal and coking industries of this country, Great Britain and continental Europe. The knowledge thus acquired, together with the expenditure of large sums of money, has made possible the accomplishment of wonderful results along the lines of safety and welfare improvement.

Every official and foreman has impressed upon him the fact that safety is to be the first consideration and the 25 safety rules adopted by the company cover almost every possible element of danger. To enforce these rules the company employs four mine inspectors,

who are constantly on the alert to protect the workmen. Once a week there is a meeting held at every mine, attended by the superintendent and his subordinates, to exchange views and discuss mining conditions.

At every mine there is an organized fire-fighting force thoroughly equipped, and every town is also protected from fire by trained corps and sufficient equipment. This company established one of the first rescue and first aid stations in the United States, spent $20,000 on the work and now has 200 first aid teams.

The relief system for the benefit of injured employes and the families of employes killed in the service is one of the most advanced in existence. There is no contribution made by the employes to the fund and relief payments are made regardless of legal liability and without any legal proceedings. A compensation system is in force that provides for the retirement of the old employes on a comfortable remuneration.

During the last few years over a half million dollars has been spent in bettering the condition of the workmen with respect to sanitation and similar matters and to make the home and its environment more comfortable. The Connellsville coke region has undergone in recent years a great transformation by reason of the removal of the shacks and shanties that provided protection for the miners, and the substitution of houses of standard design and neatly painted. The houses have running water, many of them bath rooms and electric lights, and wherever possible, the streets are lighted by electricity.

More than 7,000 shade trees have been planted. The streets have been graded, the towns been thoroughly drained by complete systems of sewerage, and sanitary inspectors are on duty in each town.

Churches and schools have been established and supported, and elevating sports and recreations have been furnished for the young and old. Ball teams for the younger people have been organized and at one of the plants a large swimming pool has been erected. Tennis, croquet and other forms of outdoor sports are provided, and the parks and playgrounds are conducted on an organized basis under the supervision of a competent person. During the year 1912 alone there were 25 large and well equipped playgrounds made for the people, containing all sorts of amusements.

During the summer season magnificent gardens of flowers and beautiful lawns are seen in all towns owned by the company. The superintendent of each plant looks after the necessary grading and soiling of the gardens, and the people have, in a remarkable manner, appreciated the efforts made to beautify their homes and seem to take great pleasure in keeping the gardens and lawns in perfect condition. Prizes are given for the best gardens and lawns.

Much has been done by this company, but all that has been done so far is but a part of a great general plan to be completed in the future."

The above incomplete record conveys a pretty clear idea of the great change that has taken place in mining conditions. There are other companies in both the bituminous and anthracite regions with records in many respects equally commendable. While the operators in the anthracite region have probably not given as much attention to the improvements in the living conditions of the miners and

their families, they are all noted for their advanced methods of mining and the great regard shown for the safety and health of the employes. The development of safety first and rescue work and particularly the progress made in educational facilities have been greater in the anthracite region than in the bituminous region and much greater than in any other mining community in the United States.

FIRST AID AND RESCUE WORK

The first aid movement, a movement inspired by a generous consideration for the welfare of men working at dangerous occupations, has had a great development in Pennsylvania, and many of the mine operators and officials have given liberally of their time and means to train their men to a high degree of efficiency in the work. First aid is a modern and unique method of rendering help in times of emergency, and the recognition of its utility is manifested by its rapid growth and universal adoption.

The first organization of the kind in Pennsylvania and probably in the United States was a corps organized at the Jermyn Colliery of the Delaware and Hudson Company in the anthracite region in 1899 by Dr. M. J. Shields, a practicing physician and surgeon in that region. Since that time the beneficent work has been extended until today there are hundreds of first aid teams comprising more than 5,000 men, and the total number instructed in the work thus far is approximately 10,000. In 1913, 47 lives were saved by the prompt treatment rendered by this efficient agency.

The first aid work in the mines comes under two heads,—first, the providing of proper material for first aid dressings, and, second, seeing to it that wherever a considerable number of men are employed, there shall be somebody who is thoroughly instructed in the methods. To be effective, there should be a first aid corps of four or six men at each colliery employing more than fifty men inside. In case of an explosion or mine fire prompt assistance would then be rendered to those who are injured or whose lives are endangered. Quick action is necessary if life is to be saved after an explosion, a mine fire or a general cave-in of the overlying strata.

A successful adjunct to the first aid corps are the rescue corps, equipped with oxygen helmets that enable the wearers to enter a mine at the time of an accident when the conditions due to gas or smoke or dust are such that, unprotected, their entrance would be impossible. These corps, carefully drilled, are ready to respond promptly to any call for assistance. While the work is still somewhat experimental, the ultimate results will, no doubt, be very beneficial. The number of rescue corps in existence in 1913 was 150, comprising 978 men. Approximately 4,000 men have been instructed in the work.

RELIEF FUNDS

Mine operators have always had a desire to assist the mine workers and their families in cases of emergency, and the practice of giving financial assistance when accidents occur has constantly grown in favor, and at most collieries in the Pennsylvania coal regions there is now some organized system of relief. The methods vary greatly, but in most cases the work is mutual, the operators and employes both contributing to the fund. At some collieries the employes

have organizations of their own. The most noted and comprehensive relief systems in the State are the Carnegie relief fund, and the systems of the Pittsburgh Coal Company, the H. C. Frick Coke Company and the Philadelphia and Reading Coal and Iron Company. The object of these systems is to provide for the employes injured while at work and for those dependent upon the employes that are killed.

HOSPITALS

The humanitarian side of the mining industry is very pleasantly emphasized by the generous ministrations of the hospitals to the sick and injured miners and their families. All through the mining regions these beneficent institutions, well equipped and intelligently managed, give daily assistance to the needy victims of accident and disease. So thoroughly has this helpful spirit been aroused and so liberal have been the contributions from the State, from the operators and from the miners' associations that the number of hospitals at which miners and members of their families may receive treatment has rapidly increased until there are now 58 of them, at which during the year 1914 treatment was given to 12,153 miners and 4,774 members of miners' families. Ten of the institutions are supported entirely by the State, forty-seven by State aid and contributions from other sources, and one by the Cambria Steel Company alone. At the latter there were 709 miners treated during the year. The State appropriation to these hospitals in 1914 was $1,065,283.59.

EDUCATION

The Pennsylvania miner and his children are particularly fortunate in the opportunities now afforded for mental improvement. The general awakening to the value of efficiency and the growing appreciation of the needs of the people in the way of education have had their effect on the mining communities and the result is seen in the increased facilities now at the command of both young and old. The mining institutes and vocational schools in the coal regions, both new projects, are doing much to better conditions. The mining institutes are a combination of a lecture course and a debating society and have attained considerable popularity as a means of education. The vocational schools conducted by the coal companies are also doing a most valuable work. They afford opportunity for the acquirement of knowledge on many important subjects connected with mining and are of valuable assistance to the student who is earnest and sincere in his desire for improvement. As is the case with all forms of education, no matter how primitive or elemental, the mining institutes and vocational schools serve not only to equip the student for a special line of work, but they also broaden the mind and in a general way increase mental efficiency.

By these free and easily accessible methods of education, the miners, if ambitious, may fit themselves for higher positions, and their children, who may just be beginning their careers in the busy world, may do much to increase their efficiency in whatever field of activity they choose to enter.

The Young Men's Christian Association is also lending valuable aid in the educational privileges it affords young men, and the Scranton Correspondence Schools have for a long time been offering

most practical and at the same time inexpensive courses of instruction, of which many thousands of young men and women have availed themselves.

That there is a beneficial reflex influence derived from the humanitarian work so imperfectly described in this article has been fully demonstrated to those who have been instrumental in the inauguration and continued advancement of its various phases. They have felt its fascination and admit to a constantly growing interest, and the consciousness of doing something to make life easier and happier for someone else, has given them a feeling of complete and pleasurable satisfaction.

Pennsylvania may well be proud of her supremacy as a manufacturing center, due to the intelligent and successful utilization of her vast coal resources. Coal has made possible the creation and maintenance of her greatly varied industries, it has enriched the operators, given subsistence to hundreds of thousands of workmen and their families and has been a blessing generally to mankind. It is only proper therefore that every consideration should be given to the welfare of those engaged in the arduous and dangerous work of extracting the coal from the depths of the earth. This responsibility has been fully recognized by the State and by the operators, and how thoroughly and successfully they have discharged the heavy obligation placed upon them is evidenced by the comprehensive mining laws now in force, by the large and efficient corps of inspectors, by the modern safety devices in and about the mines and lastly by the improvement in the living conditions and social environment of the mining communities.

COAL MINING AT HOME AND ABROAD

A good deal has been written recently regarding coal mining conditions in foreign countries, and it is evident that there are many things pertaining to the operation of the mines abroad and the general welfare of the foreign miner that are most admirable and worthy of imitation by our mine operators. The conveniences and advantages, however, are more than counter-balanced by the many restrictions and limitations that would be unbearable to the American workman and against which he would register a most decided objection.

One of the pleasant and interesting features connected with mining operations abroad is the completeness and perfection of the buildings and equipment about the collieries and the neatness and attractiveness of the surroundings. According to a recent writer in Coal Age, it is a decided pleasure to visit the coal fields of continental Europe. After a careful inspection of the collieries in Germany, France and Belgium, he is full of praise of the manner in which the great industry is conducted in those countries.

In Germany, in the Westphalia region, the giant steel frames and magnificent colliery buildings impress the observer with their suggestion of permanence and perfection. The operating plants are all very modern, and everything is kept in immaculate order. According

to the writer referred to, who visited the European coal fields lately, "Not even a telegraph pole is out of the perpendicular; no weeds growing, no wooden shacks in sight. In fact no wooden buildings, and every inch of available ground is under cultivation."

The writer finds it difficult to describe adequately the magnificence of the interior of the buildings. He says, "The polished machinery, the beautiful floors and tiled walls must be seen to be appreciated. In the power houses, the switchboards resemble giant pieces of drawing-room furniture. The entrance hall for the miners at the Hermann colliery near Dortmund would be quite suitable as a banqueting chamber. One would think the designer had copied it from a castle on the Rhine. Around the interior are the offices of the different officials, and the miners enter the hall and pass to the window of the official they wish to see between shifts."

Soft drinks may be had for a trifling sum at bars installed at the collieries. Bath houses are provided with private baths for officials and visitors. Complete outfits of clothing are also provided at most of the continental mines for visitors, and when the visitor ascends the shaft he finds his bath ready with clean towels and soap, and his clothes brushed and laid on a table.

All the workers in German mines are educated or have an opportunity to obtain an education. The Government places scientific knowledge to a certain extent above militarism. The colliery owners in that country are firm believers in education and maintain classes where their employes are trained. There are also preparatory schools where instruction is free and where miners are admitted who have been employed in the mines for not less than two years. Attendance at the preparatory schools lasts for two years, eight hours weekly during the first eighteen months and ten hours weekly during the last six months. The subjects taught are the German language, arithmetic, geometry, drawing, elementary natural science and laws relating to coal mining.

This education, comprehensive as it may seem to us, only fits the miner, however, for a position as under-official. He cannot hope to attain to a high position such as manager, superintendent or mining engineer. The education of the officers who have charge of mining operations in continental countries is generally of a very thorough character. In Germany the training of a mining engineer is about as follows:

"He starts going to school at the age of 6, and at 18 or 19 he enters the mines and works underground for one year. He then takes his first examination, and, having passed it, he starts on another period of four years' training, and then comes his second examination. Having passed that he has another four years' training in front of him, and during the last four years he will serve his one or two years with the army. He is not at the university during the whole of the last two periods, but for two or three months at a time he is at the mines holding generally an official position of minor importance. He then takes his third and final examination; he may pass it, or he may not; if he does not pass he sits again and may be over 30 years of age before he secures his final certificate and is available for a position as inspector of mines for the government, or able to act as manager or mining engineer. After passing

his final examination he is given the title of Bergassessor. He generally speaks English and French in addition to his own language."

Notwithstanding the strict discipline in foreign mines, the education of the miners, the exaggerated attention given to details of operation and the absence of haste in extracting the coal, the accident record is but little better than in this country. In Germany, especially, where efficiency reaches its highest development, one would expect the number of accidents to be less, but the usual and common accidents occur there almost as frequently as in this country and disasters of great magnitude at times bring death and injury to scores of workmen.

Recently an explosion at the Radbod colliery, Westphalia, resulted in the loss of 348 lives, including six officials. France, Belgium and Great Britain, and in fact all mining regions, have numerous fatal accidents. It is evident that the occupation is dangerous alike in all countries, and the American preventive methods seem to be about as effective as any of the others. In all mining regions explosions appalling in their destructive force may be expected occasionally and at all times there continues the steady death toll from small accidents due generally to carelessness. About sixty per cent. of mining fatalities the world over are caused by falls of coal and slate, accidents that in most cases could be prevented by proper observance of the rules of safety.

Wages in Europe are comparatively low. Miners receive an average pay of about $1.50 a day of eight hours, contract company men about $1.25, and laborers on the surface about $1.20. One feature universally condemned is the employment of girls to pick slate. In this country, the conception of duty being higher, this practice has never been in vogue.

The Pennsylvania miner, all things considered, has a much preferable position to that of his fellow laborer in foreign fields, not only as a wage earner, but as a citizen with the rights and privileges peculiar to America's free and progressive form of government. His pay is higher, he has less harsh discipline, his opportunities for advancement—for getting out of a rut—are infinitely greater. The doorboy of today may hope to be the foreman or superintendent of the future. The home surroundings that heretofore have been undesirable and unattractive are daily becoming more pleasant. Comfortable houses with modern conveniences, gardens in which the family may find healthy and remunerative recreation in spare hours, neat front yards, public playgrounds, increasing educational facilities, all these and many more advantages are his and all tend to elevate and refine his social condition, and make life easier, happier and in every way more desirable.

CERTIFIED MINE FOREMEN AND FIRE BOSSES

Officials who have much to do with the safe conduct of the mines are the Mine Foreman, the Assistant Mine Foreman and the Fire Boss. The Mine Foreman has full charge of the inside workings of the mine and it is his duty to see that the condition of

the mine is safe at all times for the employes, and in the event of any menace to their life or health, he must take immediate action to protect them by removing the threatening condition.

The Assistant Mine Foreman is employed when the workings are too extensive for the Mine Foreman personally to carry out the provisions of the law and he is at all times under the supervision of the Mine Foreman.

The Fire Boss has as his chief duty the examination of the working places before the men enter to go to work. His task is one that requires constant vigilance.

The importance of the work of these men is so well recognized that special qualifications are demanded of them. The law requires that they must have had at least five years' practical experience inside the mines and be of good moral character and of known temperate habits before they can receive certificates of qualification.

Under the law certificates of qualification are issued by the Department of Mines to Mine Foremen, Assistant Mine Foremen and Fire Bosses upon reports made by the various district Examining Boards. The number of certificates issued since 1903, when the Department of Mines was organized, is as follows:—

Anthracite:	
Mine Foremen,	3,941
Assistant Mine Foremen,	4,900
Bituminous:	
Mine Foremen, First Grade,	1,754
Mine Foremen, Second Grade,	1,283
Assistant Mine Foremen,	585
Fire Bosses,	3,125

LITIGATION WITH RELATION TO THE DUTY OF THE CHIEF OF THE DEPARTMENT OF MINES IN THE MATTER OF ISSUING CERTIFICATES OF QUALIFICATION TO MINE FOREMEN AND ASSISTANT MINE FOREMEN IN THE ANTHRACITE REGION

On the 24th day of June, 1914, James Matthews, President of District No. 9 of the United Mine Workers of America, filed a Bill in Equity, Equity Docket No. 530 of the Court of Common Pleas of Dauphin county, against James E. Roderick, Chief of the Department of Mines, for the purpose of restraining him from issuing to a number of persons named in said Bill certificates of qualification as mine foremen and assistant mine foremen.

The persons to whom the Chief of the Department of Mines was about to issue certificates had been examined by the Boards of Examiners in the various anthracite districts appointed by the court to examine applicants for certificates of qualification as mine foremen and assistant mine foremen; the said Boards of Examiners had filed in the Department reports of qualification setting forth that the persons in question had passed satisfactory examinations

and had given satisfactory evidence of "at least five years' practical experience as miners" and of good conduct, capability and sobriety.

It was alleged by the plaintiff in his Bill that the applicants in question were not eligible to take the examination because they had not, in fact, had "five years' practical experience as miners" within the meaning of the Act of June 2, 1891, and hence an injunction was prayed for to restrain the Chief of the Department of Mines from issuing to them certificates of qualification.

It was contended, in behalf of the plaintiff, that five years' practical experience as a miner means five years' actual experience in cutting coal at the face, and it was shown that although a number of the applicants had had five years' experience in various capacities in and about the mines, they had not had five years' experience in cutting coal at the face.

Pending a decision on this Bill in Equity by the Court, no certificates were issued to the applicants in question.

After a full hearing, the Court on the 5th day of January, 1915, filed an opinion holding in substance that the Court had no jurisdiction to control the discretion of the Board of Examiners in holding examinations and certifying persons as being entitled to receive certificates of qualification.

In the course of its opinion the Court said:

"The plaintiff alleges that the law requires that the persons examined by the Boards shall have first had five years' practical experience in mining coal at the face or cutting coal directly from the vein. If this contention is correct, the testimony offered would seem to indicate that certain of the persons whose examinations have been sustained by the Board of Examiners have not had this experience. The statute, however, does not in terms declare what is necessary to constitute five years' practical experience as miners. It does not say that this experience must be in cutting coal at the face for five years or in the doing of any particular work in a mine. A person successfully passing an examination must satisfy the Board of Examiners that he has had five years' practical experience as a miner, and each Board is left to determine in the case of each applicant whether he has had the statutory practical experience to entitle him to a certificate of qualification as a mine foreman or assistant mine foreman.

The Members of these Boards must possess practical experience as miners or as owners, operators or superintendents of mines, and the Legislature seems to have left to the discretion of the several Boards the determination of what practical experience really is. * * * It is of the utmost importance to the health and safety of persons employed in the mines and workings underneath the surface that only persons of undoubted competency be entrusted with the duties of mine foreman or assistant mine foreman. If, as contended by plaintiff, years of experience in cutting coal at the face or from the vein is necessary to secure such competency, the Legislature should so declare. It has not yet done so. It may be that a person whose only experience has been in cutting coal from the vein, would know but little of the slopes, shafts, appliances and machinery for hoisting, ventilating and other purposes, and would be less competent than a person having a wider and more varied experience in the underground workings of a mine. The employment of a person for five years in any single line of mining work would be exceptional, and the operation of the Act would be greatly limited if it applied only to such persons. The question is a legislative one, and its decision can only be made by the General Assembly."

The Court accordingly entered a decree dismissing the Bill at the cost of the plaintiff and refusing the injunction to restrain the Chief of the Department of Mines from issuing certificates to the applicants in question. Exceptions were duly filed to this decision, but they were dismissed by the Court of Common Pleas of Dauphin county, whereupon an appeal was taken by the plaintiff to the Supreme Court of Pennsylvania, which appeal is now pending, but has not yet been argued.

CONSERVATION

The necessity for conserving the coal deposits of Pennsylvania, so rich in quality and quantity, has received scant consideration in the past, but in recent years the general clamor for conservation has had its influence on the users of coal, and practical efforts to utilize this valuable product to the greatest advantage are now being made in both the Anthracite and Bituminous regions.

In the Bituminous region the greatest evidence of the saving of coal is seen in the rapidly growing use of the by-product coke ovens. There was a time when the bee-hive ovens were looked upon as meeting fully the requirements of the coke manufacturer. They produced the coke, the object desired, and little thought was given to the waste of coal. The new by-product ovens, however, are savers of coal. In fact they conserve material enough from the gases they evolve to almost pay for the whole coking operation, leaving the coke, itself, as practically clear gain. This means that the inherent values of the coal are being conserved and utilized to a remarkable degree.

In the Anthracite region, years ago, it was thought that the small sizes, such as chestnut and under, could not be utilized to advantage. The result was a vast accumulation of what was called dump or culm banks throughout the region. Today, by reason of advanced methods and the increasing necessity for conserving the coal production, all sizes of anthracite above 1-16 inch mesh possess market value and a large percentage of the revenue of many of the operating companies is now derived from the utilization of these culm banks under methods that separate and prepare the good coal that they contain. The early mining of anthracite was conducted in the best and cleanest of coal measures and owing to the quantity of coal and the freedom with which it was mined, a good deal of marketable fuel was rejected by the slate pickers and also a considerable quantity by reason of the coal adhering to the slate. The culm banks contain frequently as good a quality of fuel as the fuel that was shipped to market. As anthracite is but little affected by water on account of the great amount of fixed carbon it contains, the coal that is now being secured from the culm banks and properly washed and prepared, represents a grade of fuel about as fine as any secured at the present time by direct mining. The cost of production is small, as the entire process is carried on by the use of machinery.

THE NECESSITY FOR ADDITIONAL MINING LEGISLATION IN THE ANTHRACITE REGION

The progress in mining operations and the many changes in mining conditions having rendered inadequate the existing legislation in the Anthracite region, the Department with the view of obtaining more advanced and effective laws, was instrumental in having the following act passed by the Legislature of 1911.

"AN ACT

Authorizing the appointment of a commission to revise and codify the present anthracite mining laws; defining its powers and duties, and making an appropriation to defray the expenses of said commission.

Section 1. Be it enacted, &c., That the Governor of the Commonwealth be and he is hereby authorized to appoint a commission to revise and codify the present anthracite mining laws of Pennsylvania; said commission to be composed of nine members, three of whom shall be selected from among the operators, managers, and superintendents of the anthracite region, three from among the mine workers of the anthracite region, one shall be a member of the Senate of the session of one thousand nine hundred and eleven, one shall be a member of the House of Representatives of the session of one thousand nine hundred and eleven, and one shall be a person versed in the art of mining and who has no pecuniary interest in the operation of any coal mine in Pennsylvania."

The Commission as appointed by the Governor held a great many meetings and prepared a code that met the approval of the majority of the members. Some of them, however, dissented from the views of the majority and prepared a minority code. Both codes were introduced in the Senate and House in the session of 1913.

In defense of the provisions of the majority code, I, as the Chairman of the Commission, prepared the following statement, which was read before the Committee on Mines and Mining of the Senate when the bill was before that Committee for consideration.

Gentlemen:—

The fight against the proposed Anthracite Code recalls the fight made at the Session of the Legislature of 1909 by the operators and miners of Western Pennsylvania against the enactment of a new Bituminous Code.

I was Chairman of the Commission that prepared the Bituminous Code and was denounced by the operators in unmeasured terms. They claimed that they were being deprived of their rights and that their properties were in danger of being confiscated. The miners made a bitter attack on the code also, insisting that it would add additional dangers to coal mining. The operators and miners combined were able to make the Committee on Mines and Mining of the House believe their extravagant charges and the code was never reported from committee.

However, in the summer of 1910, many of the operators and miners of Central Pennsylvania came to the conclusion that a mistake had been made in 1909 and requested the Chief of the Department of Mines to prepare another code. The work was taken up again, using the Code of 1909 as a basis. After numerous meetings with the leading managers of the coal companies and with the leaders of the miners, including President Gilday, of the Central Pennsylvania District, a new code was prepared that was acceptable to both operators and miners.

The amended code was presented to the Legislature of 1911, and was very unexpectedly opposed again by some operators as being too drastic. They claimed it would add an additional cost to production that they could not stand in view of the low price of coal. A most bitter fight was also made against it by organized labor from Western Pennsylvania. After many hearings, however, the Committee on Mines and Mining reported the bill to the House and it was passed by the House and Senate with a fair majority.

The question of a new Anthracite Code naturally next received attention, and, in accordance with the urgent demand and a well

recognized necessity for the amendment of the existing laws, Senator Catlin introduced a resolution in the Legislature of 1911 authorizing the Governor to appoint a commission to revise and codify the laws.

The resolution called for a commission of nine members, three of whom were to be selected from among the operators, managers or superintendents in the Anthracite region, three from among the mine workers, one a member of the Senate, one a member of the House of Representatives, and one a person versed in the art of mining.

In accordance with this resolution the Governor appointed a commission as follows: W. D. Owens, West Pittston, William R. Reinhardt, Shamokin, and W. G. Robertson, Scranton, to represent the operators; H. G. Morgan, Scranton, Peter O'Donnell, Wilkes-Barre, and Martin A. Nash, Glen Carbon, to represent the mine workers; Sterling R. Catlin, Wilkes-Barre, Senator; E. E. Jones, Harford, Member of the House of Representatives, and James E. Roderick, Hazleton, Chief of the Department of Mines. The Governor designated Senator Catlin as Chairman.

The commission was called together by Senator Catlin, and Mr. O'Donnell was elected Vice Chairman, and Hon. W. W. Hall, of West Pittston, was elected Secretary and Attorney for the commission.

After the commission had held a few meetings it was decided that the work might be expedited by the appointment of a sub-committee to prepare the various articles of the code for the consideration of the whole commission. The Chairman named the Chief of the Department of Mines as Chairman of the sub-committee, Mr. O'Donnell as representative of the miners, and Mr. Owens as representative of the operators.

The sub-committee met with Secretary and Attorney Hall, and it was decided that each member should prepare certain articles. It was soon found, however, that neither Mr. O'Donnell nor Mr. Owens had time to devote to this work and the Chief of the Department of Mines felt that the duty of preparing the articles devolved upon him. He therefore prepared and submitted the various articles, and after they were considered by the sub-committee and finally passed upon by the whole commission they were incorporated in the code as presented to the Legislature.

I may be permitted to say here that the code as presented to you is not in the form as prepared originally by the Chief of the Department of Mines, but is a compromise to meet the views of Mr. O'Donnell and Mr. Owens and the full commission. The main object in mining legislation, however, is to safeguard the health and life of the employes and to protect the property of the operators, and this object was at all times kept in mind while drafting the various articles.

My experience of more than fifty years in and about the mines of this Commonwealth and especially my experience as head of the mine inspection service of the State has taught me that discipline, and rigid discipline at that, is the only remedy left untried that will reduce accidents in the mines.

The Bituminous Mine Law approved June 9, 1911, with similar requirements, has enforced better discipline, with the result that accidents last year were reduced over 15 per cent.

It would be too much to expect the members of this Committee, most of whom are not miners or experts in mining, to be familiar with the subjects covered by this bill. I shall therefore endeavor to state clearly some of the salient points:

Article 2. Definitions. Here are defined many terms omitted in the Law of 1891 and in the Bituminous Law of 1911. These definitions make it easier to comprehend the provisions of the several articles.

Article 3. The duties of owners, operators or superintendents are clearly set forth and are more fully covered than in the Bituminous Law of 1911 or the Anthracite Law of 1891.

Article 5. The duties of the Mine Foremen's Examining Boards are brought out at length. Section 5 reads:

"The members of said Boards shall select at such a meeting a committee of six of their number, comprising two inspectors, two miners and two superintendents, who shall meet in the city of Harrisburg on the third Tuesday in April to formulate a code of questions to be used at the next succeeding examinations. This committee shall select one of their members as chairman and one as secretary. The questions prepared by the said committee shall be printed under the personal direction of the chairman and sent by him, by registered mail, in sealed packages, each package containing a set of questions for each session, to the chairman of each Board of Examiners, who shall break the seal and open the package at the commencement of each session in the presence of the applicants and the other members of the Board."

If the code before you becomes a law, it will prohibit the issuing of certificates of competency to mine foremen, assistant mine foremen and fire bosses who are not competent, and such persons will not thereafter be put in charge of mines, especially gaseous mines, where the health and safety of the employes would be jeopardized thereby. I am sorry to have to say that scores of such men are today in charge of Anthracite mines. This article is identical with an article in the Bituminous Law of 1911, and I am in hopes that it will be the means of giving us more competent men in charge of mines.

Article 6 covers fully the duties of mine foremen and assistant foremen in a way that will compel them to see that the mines are kept in a safe and sanitary condition. This, I hope, will prevent the daily loss of life, especially from "falls and cars," which now aggregates nearly seventy per centum of the accidents. Of this number at least fifty per centum are preventable if proper care is taken.

The commission has been criticised for giving too many duties to the mine foreman, because the Supreme Court has decided that no damages can be collected from an operator if a life is lost through the negligence of the mine foreman. While preparing this article no thought was given as to how damages could be collected in case of loss of life. The only thought was *to prevent, if possible, the loss of life.* As I have said before, the reduction in accidents in mines depends mostly on the mine foremen, assistant mine foremen, fire bosses and miners.

I have been of the opinion ever since I wrote my first report in 1881 that the injured workmen and the persons dependent upon those who are killed in or about the mines should be taken care

of, and I am glad to see that the "Compensation Act," prepared by the Commission appointed by Governor Tener and introduced by the Hon. Daniel Shern, provides the means for accomplishing this purpose.

Article 7 covers the duties of fire bosses as they were never covered before. The Minority Report also presented to the Legislature by three members of the commission who refused to sign the Majority Report, provides that the assistant foreman and fire boss can be the same person, performing two duties. That is in line with the desires of the operators on the commission, but the Majority Code before you provides for three grades of certificated officials, namely, a mine foreman, an assistant mine foreman and a fire boss. There is nothing, however, in the code that prevents a mine foreman from acting as an assistant mine foreman or as a fire boss, but he cannot hold both positions at the same time. Nor is there anything to prevent an assistant mine foreman from acting as a fire boss, but he cannot hold both positions at the same time. A fire boss, however, cannot act as assistant mine foreman, except in an emergency. From my experience I am firmly of the opinion that the three grades of officials should be included in the Anthracite Law as they are included in the Bituminous Law of 1911.

Article 8. This is a new article defining the duties of the outside foreman.

Article 9. Duties of Mine Inspectors' Examining Board, follows closely the article on this subject in the Bituminous Law of 1911, which is practically the same as it was when this law was first enacted in the Session of 1876 and 1877. This article has been in vogue for thirty-five years and has given satisfactory results, for which I can vouch after fourteen years of experience with it. I suggest that this Committee give this article due consideration, and especially section three, which defines the qualifications of an inspector. It reads in part:

* * * "They shall be citizens of this Commonwealth and residents of the Anthracite region, of temperate habits, of good repute, of personal integrity, in good physical condition, and not under thirty-five nor over fifty-five years of age. They shall have a comprehensive knowledge of the different systems of working and ventilating coal mines, and shall have had at least ten years' practical experience in mines as miners, fire bosses, mine foremen or superintendents, five years of which immediately preceding the examination shall have been in the anthracite mines of this Commonwealth. They shall have had practical experience with explosive gas, dangerous and noxious gases found in coal mines, and shall have a general knowledge of mines, mining and machinery, and of the chemistry of gases generally found in coal mines. They shall be conversant with the work of first aid corps, and with the work and requirements of the rescue corps. They shall be conversant with the science and use of electricity as applied to coal mines, and shall have sufficient knowledge of the science of mining engineering to enable them to understand and read the mine workings of any mine as shown on maps presented at the examination, and to make a cross section of any mine from said maps when so required by the Examining Board.

They shall give evidence of such theoretical as well as practical knowledge and general intelligence respecting mines and mining and the working and ventilation of mines, as will satisfy the Board of their capability and fitness for the important duties imposed upon the inspectors by the provisions of this act."

Section 4 reads: "The principal examination shall be in writing, and each applicant shall also undergo an oral examination pertaining to explosive gas and noxious gases, safety lamps and general methods of mining. The questions and answers in the oral examination shall be reported verbatim by an expert stenographer and typewritten fully to assist the Board in the work of rating the qualifications of the applicants. The applicants who have made a general average of at least ninety per centum shall be deemed successful."

Section 5 reads: "The manuscripts and all other papers of the applicants in the principal examination, together with the tally sheets and the correct solution of each question as prepared by the Examining Board, and also the stenographic report of the oral examination shall be filed in the Department of Mines. * * * *."

Section 6 reads: "The Governor shall from the names certified to him by the Examining Board commission the person or persons having the highest percentage in the examination to be inspector for each district where a vacancy exists. * * *."

I have quoted these sections for the reason that the Minority Report recommends that the holders of mine foremen's certificates be eligible to become inspectors by an election without further examination. Section 8 of Article 15 of the Minority Report reads:

"Provided, however, that all persons holding mine foremen's certificates shall be eligible to run for the office of mine inspector, and if any person holding a mine foreman certificate desires to run for the office of mine inspector he shall file his mine foreman certificate with the county commissioners in the county in which he resides; after the filing of such certificate with the county commissioners his name shall be placed on the official ballot."

When it is considered that the number of inspectors in the Anthracite region is twenty-one, while there are four hundred mine foremen in actual service, and possibly one hundred others holding certificates, many of whom have never acted as mine foremen and others who have lost their positions through incompetency and other causes, some of the one hundred being employed as miners and miners' laborers and at other occupations, I am at a loss to understand how any intelligent body of men could advance the idea that the law should permit these men to be eligible for the office of mine inspector, and I am willing to risk my reputation as a mining man when I say that not more than four per centum of these people could even, after hard study, pass the examination qualifying them for the position. If the election of inspectors would be of benefit to the Anthracite Mine Workers, why would it not be of benefit to the Bituminous Mine Workers? Or is it a fact that the present leaders of the Anthracite Mine Workers are merely playing a desperate game to control the inspectors in the Anthracite region?

It is a pity that an effort has been made to lower the standard of efficiency among the mine inspectors, when in every other civilized country an effort is being made to raise the standard not only of the inspectors but of all mine officials.

Article 10 deals with the duties of mine inspectors. Section 1 reads: "The inspector shall devote the whole of his time to the duties of his office. It shall be his duty to examine thoroughly each mine and the outside workings thereof as often as possible, but at least once every three months, giving special attention to all mines liberating explosive gas, and to all other mines where unusual dangers exist, or may be suspected to exist, *to see that all the provisions of this act are complied with*, especially those that affect the safety of life, health and property therein, and those that demand that the air current be carried to the working faces."

Without reciting more of the duties of inspectors, I may say that it is their duty *"to see that all the provisions of this act are complied with."*

The sub-committee and the majority of the commission, in the hope of decreasing accidents in and about the mines, have provided that the owner or operator shall employ a superintendent for each colliery; that the operator or superintendent shall employ a mine foreman for each mine (with few exceptions); that the superintendent and mine foreman shall employ a sufficient number of assistant foremen and fire bosses so as to comply with the provisions of this act, and that the superintendent shall employ an outside foreman for each colliery. To see that these provisions of the law are carried out by the persons named is the duty devolving upon the State Mine Inspectors.

An effort has been made to emphasize the duties of the most important classes of employes, by stating definitely the duties of the operator, the superintendent, the mine foreman, the assistant mine foreman, the fire boss, the outside foreman, the miner, the driver the hoisting engineer, the fan engineer, the fireman, the motorman or locomotive engineer, the furnaceman, the footman and the headman. The thought in the mind of the commission was to impress upon the officials and employes the full significance of their duties. It is a well known maxim that a general duty is not apt to be the duty of any particular person.

Article 14 deals with ventilation. Section 2 reads: "The ventilation shall be conducted to and along the face of every working place in the mine, in sufficient quantities to dilute, render harmless and carry away smoke and noxious and dangerous gases, to such an extent that all the working places and roadways shall be kept continually in a healthful and safe condition for the employes who work and travel therein."

Article 16 provides where safety lamps and open lights can be used. It is a new article, but it was needed to make a complete Anthracite Mine Law. Section 1 reads as follows:

"The use of open lights is prohibited in any gangway, airway, travelingway, or in any other working place where explosive gas is being liberated in such quantity as will indicate danger by an approved safety lamp, or other approved device, also in pillar workings where a sudden inflow of explosive gas is likely to be encountered, and all such places shall be worked exclusively with locked

safety lamps. The use of open lights is also prohibited in all working places, roadways, or other portions of the mine through which explosive gas is carried in the air current in quantities indicating danger."

Article 17, Shafts, Slopes, Openings and Outlets, follows closely the Anthracite Law of 1891, with several new points introduced.

Article 20, Boundary Pillars, is a new article, compelling land owners and operators to leave a sufficient pillar to withstand the possible pressure of water between properties; also directing when such pillars may be removed, and providing, in addition to the penalty clause, to treble the value of coal that is removed from any such pillar.

Article 21 treats on the use of electricity, and was modeled by the Chief of the Department of Mines after the New South Wales Act for the Bituminous Code introduced in the General Assembly in 1909. It was subsequently somewhat modified by the American Congress of Mining Engineers and then adopted for the Bituminous Code of 1911. Some changes have been made to suit the Anthracite conditions. It is lengthy, but very complete. If this article is lived up to, few lives will be lost in the mines through electricity. In the Bituminous region the accidents from electricity have been reduced from 39 in 1911 to 18 in 1912, under the Code passed in 1911.

Article 22, Inspection by or in behalf of Employes. This is an entirely new article inserted especially to give the employes an opportunity to make an inspection of any place in the mine after a fatal accident has occurred, giving them the right to have an attorney or an electrical engineer accompany them. Section 2 provides: "Every facility shall be afforded by the mine foreman and all persons employed * * for the purpose of the inspection. * *."

Article 23, Miners' Examining Boards. This is the same as the Law of 1897, which, in my opinion, is entirely wrong in its provisions and its adoption was a monumental mistake on the part of the commission.

Article 24, Duties of Miners. This is a new article, but several of the points were covered by the Law of 1891. It contains two important new provisions.

Section 2 provides: "A miner, whether using black powder, high explosives, or permissible explosives, shall tamp the hole complete to the mouth, irrespective of whether it is fired by electricity, fuse or squib, and in charging the hole he shall only use one kind of explosive."

Section 3 provides: "A miner who is preparing to explode a blast by the use of a fuse shall at all times cut the fuse of sufficient length that it shall protrude at least six inches outside of the hole, and said fuse shall be lighted at the extreme end so as to give the miner ample time to reach a place of safety."

These two sections were prepared so as to safeguard life from blasts, premature and otherwise, as about 10 per cent. of the accidents in the Anthracite mines are from these causes.

Article 26. Rescue and First Aid Corps.

Article 28. Regulations for Explosives and Detonators.

Article 30. Regulations for Oil.

Article 31. Code of Signals.

Article 33. Inside Stables and Buildings.

The foregoing are all new articles.

Article 36, Check System. This is a new article prepared for the purpose of keeping track of the employes who enter the mines. It provides for the registering of the name or number of each employe as he enters and leaves the mine. It also provides the means for rescuing, if necessary, any person who is shown by the record not to have come out of the mine.

Article 37 is also new and defines the duties of hoisting engineer, fireman, headman, footman, furnaceman, fan engineer, motorman or locomotive engineer and driver. It also makes it the duty of the inspector to see that all these employes comply with the law. I have no hesitancy in saying that if this code as presented by the majority of the commission shall become a law, it will reduce accidents, as has been the case in the bituminous mines under the Law of 1911.

Concerning the method of selecting mine inspectors, I have always been of the opinion that the election of mine inspectors by the people would be a most dangerous and pernicious practice, one that would lower the dignity of the office and be detrimental to the best interests of the mining community. To throw these important offices open to the whim and caprice of the political element in the different districts is to place a severe handicap upon the inspectors in the discharge of their duty. If they would retain their places they must of necessity cater to or at least listen to the political leaders, and no matter how conscientious they may be or how earnestly they may desire to enforce the laws governing the mining industry, occasions will arise when the opposing influences at work are so powerful that they must yield the point at issue or incur the displeasure of those who will later on endeavor to have them deposed.

The evil effects of this practice in the anthracite region have been far-reaching. They not only hamper the inspector in the discharge of his duties as a State officer who is supposed to look after the condition of the mines and the safety of the employes, but they are also felt in connection with the work of the Mine Foremen's Examining Board, of which the inspector is a member. He is oftentimes obliged to acquiesce in passing candidates for this important position who are utterly unqualified to fill it properly. He must act contrary to his best judgment, because he knows full well the danger of incurring the active hostility of the other members of the board. This is truly a deplorable condition of affairs.

This matter was referred to in the annual report of the Department for the year 1903 as follows:

"During late years considerable dissatisfaction was manifested regarding the inspectors, especially in Schuylkill county, and this feeling was intensified against one of them who, from mistaken judgment as to his duty, committed an act that, while not a violation of the law, was repugnant to the miners. This antagonistic feeling against the inspector was encouraged and kept alive to such an extent by a few interested persons, that the miners finally assembled in convention and passed resolutions calling upon the Legislature to amend the mining law so that the Anthracite inspectors could be elected by the people. They believed that this would do away with all objectionable inspectors and remove all causes of complaint, and

that it would also open an avenue for ambitious miners to become inspectors. The fact is, however, that the office of inspector has always been open to all miners qualified to fill it; but in all the years from 1870 to 1903 only one miner passed a successful examination before an Examining Board in the anthracite region. (The word 'miner' as used here means a man actually employed in cutting coal). The reason for this is found in the fact that the operators have always advanced the most intelligent miners to be foremen and fire bosses, and many of them have become superintendents and general managers of large corporations. One of them has recently attained the presidency of one of the most prominent coal companies. It is from the class of miners who were foremen or superintendents that the Anthracite inspectors have generally been selected, after a rigid competitive examination before a Board composed of three miners and two mining engineers. With but one or two exceptions, the Anthracite inspectors from 1870 to 1903 have been men of good moral character and practically and theoretically proficient. All the Anthracite Laws (1870, 1885 and 1891) have favored the miners in the formation of Examining Boards, as they have always had three-fifths of the membership of each Board. They have therefore been able to control the actions of the Boards, (and invariably the miners of these boards have acted as upright intelligent citizens, as they are).

In compliance with the demands of the miners, the Legislature in 1901 amended Article II of the Anthracite Law of 1891, providing that after a certain date all inspectors should be elected by the people under the general election law of the State, after first having passed an examination and answered ninety per centum of the questions propounded. The election of mine inspectors by the people is unheard of in any other State in the Union, except Kansas, or in any other country of the world. It is a most pernicious practice, as it brings the applicant for an office created for the preservation of life and property into the vortex of political intrigue, and I sincerely hope the time will soon come when both the miners and operators will demand the repeal of this *part* of the law. The evil effects of the election of inspectors may reach even to the selection of mine foremen and assistant mine foremen. The inspector is an ex-officio member of each Examining Board and there is reason to fear that in many cases poorly qualified candidates who possess some political influence may be treated with leniency not only discreditable to the Board, but inimical to the interests of the miners and operators. Incompetency in the office of mine foreman or fire boss is a menace to the lives of the miners and the property of the operators. Upon the vigilance, care and efficiency of the mine foreman and assistant mine foreman depends largely the welfare of the mining interests, and I note with regret that during the past year certificates of qualification have been granted to men regarding whose incompetency there can be little doubt."

From the annual report of the Department for the year 1908:

"Since the above article was written in 1903 the fears entertained at that time have been more than realized. The inspectors have allowed the Examining Boards to pass scores of unfit men to act as foremen, the great majority of them to act as foremen in gaseous mines. The climax was capped in 1907, when one of the Boards passed 92 out of 95 applicants. The other members of the board can

always outvote the inspector, it is true, but if he is firm in his determination to pass only competent persons, it is probable that the other members would not insist upon granting certificates to those who were not competent. Unfortunately, however, the inspectors are deterred from exercising their independence and from acting as justly as they might desire in the matter, because of the fear they have that the other members of the Board and the applicants and their friends may at some future time use their influence to defeat them for re-election.

I wish to state here that the clause in the law that provides for the election of inspectors should be annulled, and thereafter the men passing the examination for certificates as foremen and fire bosses would undoubtedly be more competent to care for the safety of the lives of the miners and the property of the operators. It may properly be mentioned here that, as Chief of the Department of Mines, I have no authority to withhold a certificate from any person who is recommended by an Examining Board as competent."

In this connection I also quote from a report made by foreign experts who visited this country in 1908 to investigate mining conditions. The Commission was composed of Messrs. Watteyne, Meissner and Desborough. These men are among the most experienced of European mining experts. In regard to the method of selecting inspectors they said: "The State cannot exercise too much care concerning the experience, technical training and selection of its inspectors. Their positions should be made independent of all considerations other than that of efficiency; and their continuance in the service should be coexistent with good behavior and proper discharge of official duty."

I also quote some opinions of expert mining men, as contained in communications received from them.

H. H. Stoek, Professor of Mining Engineering, University of Illinois:

"In regard to the doing-away of examinations for mine inspectors, I agree with you fully that it would be a backward step to make every mine foreman eligible. A man may be a perfectly good mine foreman, but not have the qualifications for an inspector, as the inspector must be an exceedingly tactful man if he is to succeed, since he is between the operator and the miner, and I conceive one of his functions to be trying to smooth over questions that may arise from time to time in regard to the enforcement of the law."

Samuel A. Taylor, Civil and Mining Engineer, Pittsburgh; Dean, School of Mines, University of Pittsburgh:

"The present high standard of inspectors and inspection of mines in Pennsylvania, I believe, is largely due to the fact that the men filling the position of Mine Inspector are, in addition to their high character, well qualified not only by practical experience but also by training and study to fill their positions. The present method of examination of candidates and the requirements imposed in connection therewith before a man can be appointed as Mine Inspector guarantee, about as well as can be provided for, a satisfactory service in the office of Inspector. On the other hand if these restrictions be removed and the office be permitted to be filled by election, I cannot see much hope of continuing the present high efficiency, for the reason that it would then become a political position and the party securing it would necessarily become more of a politician and not so much of an inspector, and consequently the service could not be maintained in such a satisfactory manner as now existing. This proposition is one of equal importance to the mine owner and miner as their interests along the line of inspection are to a large extent mutual. I have no hesitancy therefore in stating that in my opinion the mining interests of the State will not be nearly as well taken care of by the election of inspectors as by the present method of appointing them."

John Verner, Chief Mine Inspector of Iowa:

"I am pleased to note that you have taken a firm stand against the proposition to elect mine inspectors by popular vote. I understand that the miners are favoring this method of choosing inspectors, but I don't see how they can show in what manner and to what extent they will be benefitted by such a course."

John Laing, Chief of Department of Mines of West Virginia:

"I believe in a 'Government of the People, for the People and by the People,' but subordinate administrative officials should never be elected, and the more important their duties the less reason for making them elective.

The state mine inspector is nearly if not quite the most important administrative officer in any mining state, as he holds in the hollow of his hand, so to speak, many lives. If the inspector holds his office only by virtue of the popular will, to be expressed at elections every four years, he cannot perform his duties with attention solely to proper mining methods and safety of the workers as he should. He cannot help considering what any given act will mean to his prospects of re-election, however honest he may be. And inevitably mining methods or safety, or both, must suffer. A mine inspector should owe his appointment only to his chief or the governor, should be subject to instant removal by the appointing power and should know that his work and his record alone, and not popular favor or disfavor, will hold or lose his position."

R. Newsam, President, State Mining Board of Illinois:

"The election by popular vote of State Mine Inspectors cannot help but be a very vicious method and I hope and trust for the miners as well as operators and the people of the State of Pennsylvania that you may be able to change this method in mining laws. We who have worked in the mines from childhood up to the present time know that inspectors elected by such a vicious method can be nothing but tools and at no time dare to do their duty."

Colonel R. A. Phillips, General Manager, Delaware, Lackawanna and Western Railroad Company:

"I fully agree with you in every instance. The position of mine inspector should be kept out of politics.

The minute a position bearing upon the lives of workmen is used for a political foot-ball, no good results can be expected from it."

Dr. J. A. Holmes, Chief of the National Bureau of Mines, Washington, D. C.:

"The proposed draft of the law for the anthracite coal mines contains changes from the existing law which seem to me of fundamental importance and which I trust may meet with the general approval of your Commission and of the General Assembly. These relate to the method of selecting Inspectors, and the granting of certificates to miners.

With regard to the first of these changes (Article 9, Section 6), providing that the Inspectors, after having duly passed the required examination, shall be appointed by the Governor, instead of being elected by the people, I may say that after a careful study of the effectiveness of the inspection systems, not only in the different states but also in different countries, and having in view only one purpose, namely, the best method of safeguarding the lives of the miners, I am satisfied that the appointment of the mine inspectors, as is provided for in the proposed new draft of laws for the Anthracite region is much the wiser mode of procedure, and this conclusion is based upon and is in accord with the best experience of every mining country."

Resolution passed by the Coal Mining Institute of America at its winter session held at the University of Pittsburgh, December 19, 1912:

"Whereas: It has come to the attention of this Institute that a movement is now being advocated that the State Mine Inspectors be elected by a popular vote, and

Whereas: We believe that such a method would be inimical to the best interests of the mining industry and would very probably result in a lowering of the present high standard of efficiency of the State Mine Inspectors,

Therefore: Be it resolved that this Institute hereby enters its protest against this method of selection of Mine Inspectors and that a committee of three members of the Institute be authorized to convey this protest to the proper authorities at Harrisburg.

The above resolution was carried unanimously.

Attest: R. DAWSON HALL,
Editor."

The editors of all mining periodicals that have touched on the matter of the election of inspectors, and especially the editors of Colliery Engineer, Scranton, Coal Age, New York, and Coal and Coke Operator, Pittsburgh, have denounced this method in unmeasured terms.

It may be of interest to the members of this Committee to know the method of selecting Mine Inspectors in the several states in the Union, and a brief description of the various methods is therefore given.

ALABAMA

The Governor appoints the Chief Inspector and Associate Mine Inspectors. The Chief Mine Inspector designates the districts.

Qualifications: Candidates must possess a mine foreman's certificate and have had five years' experience as a miner, and be at least twenty-five years of age.

COLORADO

The Governor appoints a Board of Examiners who examine the applicants and report to the Governor those deemed qualified for Inspectors, and the Governor commissions those best qualified.

Qualifications: Candidates must have had at least five years' experience in the mines of Colorado and eight years' practical experience in the workings of mines in the United States, and be at least thirty years of age.

ILLINOIS

The Governor appoints a State Mining Board who certify to the Governor the names of all candidates who have received a rating above the minimum fixed by the Board, and the Governor then commissions an Inspector for each district.

Qualifications: Candidates must be at least thirty years of age, citizens of Illinois, and must have had a practical mining experience of ten years.

INDIANA

The Governor appoints the Chief Inspector and one Deputy Inspector, who, with the consent of the Chief Inspector, appoints the District Inspectors.

Qualifications: Candidates must have had at least ten years' practical experience in coal mining.

IOWA

The Governor appoints an Executive Council, who appoint an Examining Board. The Examining Board examines all applicants and reports to the Governor those qualified. The Governor then commissions those recommended by the Board.

Qualifications: Twenty-five years of age, citizen of Iowa and shall have had at least five years' experience in the practical working of mines.

KANSAS

The State Association of Miners elects a State Secretary of Mine Industries, who acts ex-officio as State Mine Inspector. By the con-

sent of the Executive Council, consisting of the President, Vice President and Secretary of the State Association of Miners, the Mine Inspector, elected as above, may appoint one Deputy Inspector for each district.

KENTUCKY

The Governor appoints a Board of Trustees of State College, who select a Dean of the Course of Mining Engineering as Chief Inspector. The Board of Examiners recommend to the Governor the applicants qualified for Inspector and the Governor then commissions one Inspector for each district.

Qualifications: Five years' experience in coal mines.

MARYLAND

The Governor appoints the State Mine Inspector.

Qualifications: Candidates must be at least thirty years of age and must have had five years' practical experience as a miner.

MICHIGAN

The Governor appoints a Commissioner of Labor who appoints the Coal Mine Inspector.

MISSOURI

The Governor appoints a State Mining Board who pass on the qualifications of applicants for the office of Inspector. From those reported as qualified the Governor commissions the Inspectors.

Qualifications: Candidates must be citizens of the State, at least thirty years of age and must have had ten years' practical mining experience.

MONTANA

The Governor appoints a State Board of Examiners, who file with the Governor the names of all applicants who have passed a successful examination for the office of Inspector. The Governor commissions from the list of successful applicants one State Mine inspector.

Qualifications: Candidates must be at least thirty years of age, citizens of the United States and qualified residents of the State of Montana, and shall have been employed at coal mining for ten years.

OHIO

The Governor appoints the Chief Mine Inspector, who, with the approval of the Governor appoints the District Inspectors.

Qualifications of candidates for the office of District Inspectors: Candidates must be residents of the district for which they are appointed for at least two years and shall have had five years' actual practical experience in mining in Ohio.

OKLAHOMA

Candidates for the office of Mine Inspector are nominated by political parties and elected for a term of four years.

Qualifications: Thirty years of age, a resident of Oklahoma for two years, and shall have had eight years' actual experience as a practical miner.

TENNESSEE

The Governor appoints the Chief Mine Inspector, who, with the consent of the Governor, appoints the District Inspectors.

Qualifications of candidates for office of District Inspector: A citizen and resident of Tennessee for two years, a practical miner with at least six years' experience in mining, and must possess a mine foreman's certificate.

VIRGINIA

The Governor appoints the Commissioner of Labor, who appoints the State Mine Inspectors.

Qualifications: Five years' experience at and in coal mines.

WASHINGTON

The Governor appoints the Mine Inspectors' Examining Board. The Board after examining all the applicants, recommends to the Governor those qualified to serve as Mine Inspectors. The Governor then commissions a properly qualified person to fill the office of State Mine Inspector. The State Mine Inspector, with the consent of the Governor, appoints a Deputy Inspector.

Qualifications: Citizen of the State of Washington, and shall have had at least five years' practical experience in coal mining.

WEST VIRGINIA

The Governor appoints the Chief of the Department of Mines, who appoints one Inspector for each district for a term of four years.

Qualifications: Citizen of the State of West Virginia, a miner of at least six years' experience in coal mines, or have otherwise been engaged as an employe for six years within coal mines.

WYOMING

The Governor appoints a State Geologist who acts ex-officio as Inspector of Mines.

TERRITORIES

The President appoints all Inspectors of Mines.

Qualifications: Practical miner or a mining engineer.

PENNSYLVANIA BITUMINOUS

The Governor appoints a Mine Inspectors' Examining Board to examine applicants for the office of Inspector. Applicants who make a general average of at least ninety per centum in the examination are deemed successful. The Board reports to the Governor the names and percentages of the successful candidates who are properly qualified, and the Governor from the names certified to him by the Examining Board commissions one person to be Inspector for each district.

Qualifications: Candidates must have a knowledge of the different systems of working coal seams, have had at least ten years' practical experience in bituminous mines, and shall satisfy the Board as to their capability and fitness for the duties imposed upon Inspectors.

PENNSYLVANIA ANTHRACITE PROPOSED LAW

The Governor appoints a Mine Inspectors' Examining Board to examine applicants for the office of Inspector. Applicants who make a general average of at least ninety per centum in the examinations are deemed successful. The Board reports to the Governor the names and percentages of the successful candidates who are properly qualified, and the Governor from the names certified to him by the Examining Board commissions the persons having the highest percentages in the examination.

Qualifications: Candidates shall be citizens of the State, not under thirty-five years of age, and have had at least ten years' practical experience in mines as miners, fire bosses, mine foremen or superintendents. They shall have a general knowledge of chemistry of gases and be conversant with the work of first aid corps and with the work and requirements of the rescue corps and with the science and use of electricity as applied to coal mines, and have sufficient knowledge of mining engineering to enable them to make a cross section of any mine when required by the Examining Board.

States in which the Governor appoints Inspectors' Board of Examiners, Executive Council or Board of Trustees, who examine all applicants, after which the names of the successful applicants are sent to the Governor, who commissions them for the term specified in the Mine Laws of the State: Illinois, Colorado, Iowa, Kentucky, Missouri, Montana, Washington, Pennsylvania-Bituminous.

States in which the Governor appoints the Chief Inspector, who appoints the District Inspectors: Alabama, Indiana, Ohio, Tennessee and West Virginia.

States in which the Governor appoints a Commissioner of Labor, who appoints the Inspectors: Virginia and Michigan.

States in which the Governor directly appoints the Inspectors: Maryland and Wyoming.

State in which the Miners' Union appoints the Inspector: Kansas.

State in which the Inspectors are elected: Oklahoma.

The total production of coal in 1911 in the States mentioned, except Kansas and Oklahoma, was 395,429,000 tons. In the State of Kansas, where the Miners' Union appoints the Inspector, the production was 6,254,000 tons, and in Oklahoma, where the Inspectors are elected by the people, the production was 3,074,000 tons; a total of 9,328,000 tons, or less than 2½ per cent. of the total production in the United States.

The Bill as prepared by the Commission failed of passage and the Department therefore felt it to be its duty to adopt such measures as might be necessary to give additional security to the mine workers. The inadequacy of the existing legislation to cover many of the conditions common to the mining operations of today made it incumbent upon the Department to take some action in the matter. After consultation with the anthracite mine inspectors, the Chief of the Department prepared and sent the suggestions printed herewith to all mine managers and general superintendents.

Harrisburg, Pa., December 20, 1913.

Dear Sir:—You are aware that the Department of Mines through its inspectors has constantly endeavored to reduce accidents in and about the anthracite coal mines, and I am pleased to say that in this

work the managers, superintendents and foremen have heartily cooperated; but notwithstanding our united and unremitting efforts, accidents, fatal and otherwise, have occurred with great frequency. Still hopeful, however, that some means might be found by which the lives of the mine workers could be better safeguarded, I called a general meeting of the anthracite inspectors at Wilkes-Barre on the 28th and 29th of October, at which time there was a thorough discussion of the causes of accidents inside and outside the mines. The unanimous opinion was that, to meet the existing conditions, additional safeguards beyond the requirements of the present law must be adopted.

The most prolific causes of accidents inside the mines are falls, cars, blasts, gas, falling into shafts and slopes, suffocation and explosives. During the first eleven months of the present year 510 lives were lost inside the mines as against 463 for the first eleven months of 1912.

If accidents inside the mines are to be reduced, and they should be reduced by one-half, special care and attention must be given to the causes above enumerated. In all mines, but especially in mines where the pitch of the seam is less than 35 degrees, accidents from falls must be given the greatest consideration.

I ask you in the interest of the safety of the mine workers to put in practice the following suggestions:

1. TO REDUCE ACCIDENTS BY FALLS

*(a) That in addition to the work of the fire bosses or assistant foremen before the employes enter the mine, as provided by law, you will order that two daily inspections of every working place, (except in mines where breasts are being worked full) be made by the mine foreman or an assistant mine foreman, one between 7 a. m. and 12 noon, and one between 1 p. m. and 5 p. m., while the men are or ought to be at work.

*(b) That each mine shall be divided into districts of suitable size and each district shall be placed in charge of an assistant mine foreman.

*(c) That the mine foreman shall each day enter plainly and sign with ink, in a book provided for that purpose, a brief report, stating the general conditions as to safety of the portion of the mine examined by him, describing briefly but clearly any dangerous conditions that may have come under his observation and the methods adopted to remove them.

*(d) That each assistant mine foreman shall each day enter plainly and sign with ink, in a book provided for that purpose, a report stating the general conditions as to safety of the working places visited in the portion of the mine allotted to him, describing briefly but clearly any dangerous conditions that may have come under his observation and the methods adopted to remove them.

*(e) That the mine foreman shall read carefully the daily report of each assistant mine foreman not later than the following day and shall countersign the report with ink.

*(f) That the mine foreman and assistant mine foreman on their daily inspection tours shall see that General Rule 12 is being complied with, and in addition see that props are properly placed and

fastened securely at top and bottom, so they cannot be displaced by flying coal unless broken, but if displaced or broken, they shall be replaced before any other work is done.

*(g) That the miners be provided with a sufficient number of sawed cap pieces of suitable length, width and thickness.

*(h) That the mine foreman and assistant mine foreman in their daily examinations shall insist that the miner remain at work with his laborer in every place where, in their opinion, danger is to be apprehended from falls of roof or coal, and at all times where pillars are being removed.

2. TO REDUCE ACCIDENTS BY MINE CARS INSIDE

*(a) That all gangways and main haulage roads driven after January 1, 1914, where employes travel and coal is hauled thereon, shall have a clear space of two and one-half feet from the top rail of the car to the rib, and also to the timber, which shall be made and continued throughout on the same side of the passageway, if, in the judgment of the inspector, the conditions will permit; and all such space shall be kept free from obstructions. However, if it is found impracticable by the inspector to provide such spaces, then safety holes of ample dimensions shall be made on the same side, and not more than 100 feet apart, which shall be kept clear of obstructions and whitewashed.

*(b) That the distance between props and top rails of cars used in breasts shall not be less than two feet and said space shall be kept free from obstructions.

*(c) That the height of gangways and traveling-ways wherein employes have to travel into and out of the mines, shall not be less than five feet six inches from the top of sill to roof.

*(d) That no person under the age of 17 years shall be employed as runner or driver in any mine.

*(e) That no person except the driver shall ride on the front end of the car, and no person shall ride between cars, and upon the request of the inspector a seat shall be provided for the driver.

*(f) That in slopes where persons are lowered or hoisted special cars shall be provided for that purpose, the cars to be approved by the inspector of the district.

*(g) That in gangways where platforms are used, platforms shall not extend over the top rail of the car.

*(h) That where chutes are used they shall not extend more than 12 inches over the top rail of the car, unless they are at least sixteen inches above the top rail.

*(i) That when a breast is finished or abandoned for over 30 days all chutes and platforms that may extend over the top rail of the car shall be removed.

3. TO REDUCE ACCIDENTS BY BLASTS

*(a) That wherever practicable, all blasts inside the mines shall be exploded by an electric battery.

*(b) That all such batteries used shall be approved by the mine foreman, and he shall instruct the miners as to their use, so blasts can be exploded with greater safety.

*(c) That only one kind of explosives shall be used in the same hole.

*(d) That all shot holes in coal shall be tamped to the mouth.

*(e) That a charge of high explosives in coal that has missed fire shall not be withdrawn nor shall the hole be reopened.

4. TO REDUCE ACCIDENTS FROM EXPLOSIONS OF GAS

(a) That the superintendent shall, as far as practicable, see that the provisions of General Rules 4, 5, 6, 7, 8, 9, 10 and 11 are complied with.

†(b) That cross-headings between inlet and outlet airways in each split of air when closed permanently shall be substantially closed with walls of concrete or of stone or brick laid in cement or lime mortar. Provided, however, that the inspector may give written approval of other suitable material in mines with heavy pitches.

*(c) That cross-headings between breasts, except those nearest the face, shall be closed, and a brattice from the last cross-heading shall be erected so as to conduct the air to the face. Provided, however, that the closing of such cross-headings and the erection of a brattice may be omitted on the written consent of the inspector.

*(d) That each breast when finished shall have a cross-heading driven at the face to prevent an accumulation of explosive gas.

†(e) That every permanent overcast or undercast built hereafter shall be substantially built of incombustible material.

*(f) That in each mine there shall be telephone connections between the surface and all important parts of the mine, and an attendant shall be on duty at all times at the telephone on the surface.

5. TO REDUCE ACCIDENTS IN SHAFTS

*(a) That every shaft and also every slope with an angle of over 35 degrees, wherein men are lowered and hoisted, shall have safety gates at the top and also at each intermediate lift thereof, which shall be controlled by cage, gunboat or car.

*(b) That where men are lowered or hoisted in such shafts and slopes, a safety device that will prevent overwinding and also control the speed of cage, gunboat or cars at all times shall be attached to the engine.

6. TO REDUCE ACCIDENTS BY EXPLOSIVES

†(a) That not more than five pounds of high explosives shall be taken into a mine at any one time by any one person, unless more is required for use in that shift.

*(b) That high or permissible explosives shall not be sold for use in mines unless the name of the manufacturer and name and grade of explosives are stamped on each stick.

*(c) That detonators shall at all times be kept separate and apart from other explosives until required for use.

*(d) That no frozen explosives shall be sold or given to any employe.

†(e) That no person shall thaw explosives inside or outside the mines, except by the method recommended by the manufacturer.

†(f) That black powder shall not be sold loose in kegs, cases or packages, but shall be sold in cartridges, and shall not be taken into the mine, except in non-conductive receptacles.

*(g) That detonators shall be sold in boxes of ten in a box, and not more than one box shall be sold to any one person at one time unless more are necessary for a day's work.

7. TO REDUCE ACCIDENTS FROM ELECTRICITY

*(a) That when electric power is used in and about the mines, it shall be cared for in accordance with Article XI of the Bituminous Mine Act of June 9, 1911, so far as it can be applied to anthracite mines.

8. GASOLINE AND OIL

*(a) That six months after January 1, 1914, locomotives using coal, gasoline or oil shall not be used inside of any mine and the use of gasoline or oil for generating power for any other purpose shall also be prohibited.

9. TO REDUCE ACCIDENTS BY CARS ON SURFACE

*(a) That railroad cars and other cars shall be handled with care.

*(b) That safety switches shall be placed above all breakers, so as to safeguard the loaders, and at any other place when requested by the inspector.

10. TO REDUCE ACCIDENTS FROM SUFFOCATION IN CHUTES IN BREAKERS

*(a) That no person shall shovel coal in any pocket until the loader is notified.

*(b) That the loader shall not load from any pocket until he is informed that the person or persons are out of the pocket.

11. RESCUE AND FIRST AID CORPS SHALL BE ESTABLISHED

*(a) That rescue corps and first aid corps shall be established at each colliery or at each group of collieries, as agreed upon between the superintendent and the inspector.

You are kindly requested to order that the suggestions given in this letter be carried out, as it is the sincere desire of the Department, and I know it to be your desire also, to make a record for the year 1914 in the way of reducing accidents in the mines.

Very truly yours,

(Signed) JAMES E. RODERICK,

Chief of Department of Mines.

The suggestions in the foregoing list that are marked with a star (*) are not covered at all by the anthracite mine law. Those marked with a dagger (†) are partly covered by the present law. Of the forty-two suggestions, thirty-seven introduced new rules and regulations that should be incorporated in the law.

From the reports of the inspectors for the year 1914, it is shown

that most of the companies are making an honest effort to comply with the various suggestions. A summary of the results is as follows:—

Section 1. To reduce accidents by falls. Full compliance with the different sub-sections, except in a few details.

Section 2. To reduce accidents by mine cars inside. Full compliance with the different sub-sections except in a few details.

Section 3. To reduce accidents by blasts. Is not being complied with, except by a few operators. The inspectors are endeavoring to enforce these provisions in spite of the opposition offered by the companies and the employes, especially regarding sub-sections a and b.

Section 4. To reduce accidents from explosions of gas. Is being complied with.

Section 5. To reduce accidents in shafts. Is being complied with.

Section 6. To reduce accidents by explosives. Is being complied with as to some sections only.

Section 7. To reduce accidents from electricity. Is being partially complied with.

Section 8. Gasoline and Oil. Is not being complied with. However, it applies to not more than 6 to 10 mines.

Section 9. To reduce accidents by cars on the surface. Is being complied with.

Section 10. To reduce accidents from suffocation in chutes in breakers. Is being complied with.

Section 11. Rescue and First Aid Corps. Almost all of the companies, except a few small ones, have shown great willingness to comply with the suggestions of this section. Most of the large companies have in fact been giving this matter great attention for the past eight or ten years.

The inspectors have been persevering in their efforts to obtain compliance with the various suggestions to which the companies and the employes have thus far objected, and the efforts of the Department along this line will be continued with unabated diligence. The hope is entertained that the Legislature in the near future will enact into a law the suggestions herein made, with such additional provisions as may be necessary to give the mine workers every possible protection.

The manager of one of the large companies in the region makes the statement that he has expended over $60,000 in an endeavor to comply with the suggestions of the Department, and other companies are making an equally honest and generous effort to meet the wishes of the Department.

There was a marked decrease in fatalities during the year 1914, for which the suggestions in question may to some extent be responsible, and it is the hope of the Department that the record for 1915 will be still better.

ACCIDENTS

The accident record for the year showed a gratifying decrease in the number of fatalities. The record in the anthracite region is the best since 1902 and in the bituminous region since 1897. In the an-

thracite region there were 600 fatalities or 3.32 per 1,000 employes, as against 624 or 3.56 per 1,000 employes in 1913, a decrease of 3.85 per cent. In the bituminous region there were 413 fatalities or 2.11 per 1,000 employes, as against 611 or 3.22 per 1,000 employes in 1913, a decrease of 32 per cent.

The production per life lost in the anthracite region was 151,982 tons and has never been equalled since the first anthracite law was enacted in 1870. The nearest record was in 1913 when 146,838 tons were produced. The production per life lost in the bituminous region was 353,231 tons, as against 283,086 in 1913. This record has been equalled only four times in forty years, in 1886, 1888, 1897 and 1912.

In providing against accidents, the large operating companies have a great advantage over the small ones. Many of them have specialized in safety methods and give every consideration to the welfare of the workmen. The installation of new devices and the changes in the methods of mining today are generally preceded by the statement and interrogation, "It pays; but is it safe?" or "It is a clever solution of the problem; but is it injurious to the employe?" The average number of accidents, however, remains about the same for both classes of companies. This seemingly contradictory condition is due to the fact that occasionally a great disaster, a life-wrecking explosion of gas and dust, that cannot be effectively guarded against, will come to one of the big mines and the record is spoiled. Where the specialized efforts of the large companies prove effective is in lessening the number of accidents from falls, cars and other causes that exact a continuous toll of life in all mines.

CAGE ACCIDENTS IN SHAFTS

Three accidents of an unusual character and most disastrous in results occurred during the year in connection with the use of cages in shafts. The first occurred in the Nineteenth district, April 22, at the Pine Hill shaft of the Pine Hill Coal Company, resulting in the loss of four lives; the second in the Eighteenth district, May 29, at the Maryd shaft of the Maryd Coal Company, resulting in the loss of six lives, and the third in the Third district, December 9, at the Diamond shaft of the Delaware, Lackawanna and Western Railroad Company, resulting in the loss of thirteen lives.

These accidents occasioned a great deal of comment and the operating companies were severely criticised, particularly by the persons who are always finding fault with the way in which mining operations are conducted, especially in the anthracite region.

The critics insisted that the present cages in use in the shafts, constructed of wood and steel, were unreliable and unsafe and should be replaced by steel cages. It may be stated, however, that experience has shown that steel cages are not any safer than those constructed of wood and steel, and as an argument supporting this assertion, it is pointed out that accidents to steel and wood cages as reported above have been extremely rare, not exceeding probably a half dozen in the history of anthracite mining, which dates back to 1870.

In connection with the installation of entirely steel cages, the Chief of the Department of Mines was quoted as saying that the expense would be so great that the companies could scarcely be expected to make the change. As a matter of fact, however, the steel cages are not as expensive as those now in use.

The great notoriety given the Diamond shaft disaster in the Third district led to the introduction of a bill in the Legislature of 1915 providing that no persons should be conveyed into or out of a mine by way of a perpendicular shaft except in cages of steel frame construction.

This bill, which did not include the bituminous mines, was an unfair and unnecessary measure, like a good deal of the legislation proposed from time to time in connection with anthracite mining operations; but it passed the House during the excitement created by the accident. It was then referred to the Committee on Mines and Mining of the Senate, April 13, and that was the last heard of it. There was no fight made either in the House or the Senate against this measure by any of the coal companies, and no doubt if it had been the opinion of the Senate Committee that its enactment would give additional safety to the mine workers there would have been no opposition to it whatever in that body.

In the first accident referred to in this article, a self-acting-cage, due to some unknown cause, failed to act properly and dumped the men that were riding on it into the shaft.

Owing to the very unusual character of the accident, a rigid examination was made as to the cause. At the inquest a number of witnesses were examined, but no one could advance a reason for the failure of the cage to work. The cage was examined after the accident and it was found to be in perfect working order. The Department named a number of Inspectors to investigate the matter in connection with the Inspector of the district, Mr. M. J. Brennan. This Committee after a careful investigation agreed that the shaft was in safe condition, but could give no cause for the accident. They, however, submitted two reasons, either of which might have been the cause.

"First. The cage being automatic or self-dumping has an iron plate 6 inches wide by $\frac{5}{8}$ inch thick running parallel with the cage shoe. Above the top of the cage there is a piece of similar iron extending to the shaft guide which is shaped to act as a shoe independent of the cage shoes to prevent the automatic part of the cage from working. There is a pit in the bottom of the cage that holds the cars in position. At the ends of this pit bars are placed across the cage to keep the men from falling out while being hoisted.

The men have a habit of removing one of these bars and getting on the end of the cage. It is so balanced that one person's weight will move it throwing the shoe forward and tight against the guide. Should any of the joints where the guides connect extend, this shoe would enter and fracture the guide, permitting the cage to fall into the shaft.

Second. One or more of the men who might have been standing on the edge of the cage may have fallen towards the end of the shaft and the cage striking him could have been upset. There were several cages of men hoisted the afternoon of the accident, one a few minutes before the accident. One of the engineers, James Smith, employed there 7 years, stated that he had never had any trouble with the cage. Henry Krobart, who rode on same cage on the load previous to accident, stated that there was no sign of any obstructions and the ride was very smooth.

The Commission requested the superintendent to have the top of the shoe which controls the automatic part of the cage turned or flared more backwards from the guides to guard against any chance of penetrating them, and also that he provide some device that would reach across and connect the two sections of the cage to prevent the possibility of a like occurrence in the future."

In the second accident, it seems that the engineer lost control of the engine and the cage was thereby hoisted into the sheave wheel and some of the occupants thrown back into the shaft, others into the chute.

No testimony was adduced at the inquest to show why the engineer had failed to control the engine. An effort was made to show that he had been drinking, but no satisfactory proof of this charge was offered. The verdict of the jury was as follows:—

"We, the jury, find that six men were killed at Maryd shaft on May 29, 1914, at 3.15 o'clock, by Engineer David Williams pulling the cage past the usual top landing where the men get off. We find that the said David Williams had taken an intoxicating drink a short time before entering on his duties. We also believe that the company officials at Maryd Colliery had knowledge of engineer David Williams's habits.

We recommend that the Maryd Coal Company officials be more strict in having safety chains and other safety devices applied. And we strictly recommend more precaution in selecting engineers."

The Inspector of the district, John Curran, stated in his report of the accident that "the suggestions offered in the verdict in regard to safety appliances are not warranted by the evidence, as the company's engine is supplied with a standard cut-off (the Nicholson Automatic) and their cages have had safety chains attached for over two years, but in this case the bottomman had failed to put them on. If the chains had been in place they might possibly have done some good."

In the third accident, from some unknown cause the cage, on which the men were descending into the shaft, gave way and the men were precipitated to the bottom of the shaft.

A great deal of testimony was given at the inquest in an effort to prove that the cage was in a dangerous condition and that the company should not have allowed the men to be lowered. Other testimony, however, showed that the cage had been examined the morning of the accident or the night before and found safe. Several witnesses declared that the wrecking of the cage was caused by a dynamite explosion and it was proved that one of the men had had a box of dynamite on the cage, many of the sticks having been found afterward. No satisfactory opinion can be given as to the cause of this accident owing to the conflicting testimony.

The verdict of the jury was as follows:—

"We, the jury, appointed by the coroner of Lackawanna county to investigate into the cause of the death of thirteen men killed while being lowered into the Tripp shaft, owned and operated by the Delaware, Lackawanna and Western Railroad Company, on the morning of December 9, 1914, at or about 6.20 o'clock, do find:

That Article 12, rule 16, page 33, of the Pennsylvania Anthracite mine laws, which reads, 'that not more than ten men shall at any one time be allowed to enter or leave the mine on any one trip of the carriage,' has been violated. We suggest that some arrangement be erected or devised to prevent men from entering or approaching the cage, only from the side where the headman is located or stationed; also that some device should be arranged which would aid the headman in ascertaining that only ten men are on the carriage.

We also find that the thirteen men came to their death by falling down the shaft, said accident being due to forcing out of a portion of the bottom of the cage; and after consideration of all the testimony and also an inspection of the shaft, cage, et cetera, we state that the cause is unknown to this jury."

In this connection attention is called to the table of accidents herewith.

Accidents in Shafts, 1870-1914

By falling from cages descending or ascending,	159
By overwinding,	12
By breaking of ropes,	29
By engineer losing control,	10
By cage wrecking,	4
By cage getting out of guide,	2
By brake on drum failing to work,	3
By bottom falling out of cage,	13
By falling into shafts,	251
By falling out of buckets,	24
By falling off platform,	17
By platform breaking,	12
By falling objects in shafts,	65
By miscellaneous causes,	6
Total,	607

It is a sad commentary on the intelligence and common sense of employes that the great majority of fatalities enumerated in the table above can be attributed to their own carelessness and recklessness. This is true of the 159 killed by falling from cages, the 251 killed by falling into shafts from the surface or intermediate points, the 24 killed by falling out of buckets into the shafts, the 17 killed by falling from platforms, and the 6 miscellaneous accidents.

Those who were not in any way responsible were the 12 killed in what are called overwinding accidents, that is, an accident caused by the engineer running the cage up against the top of the sheave, the 29 killed by the breaking of the hoisting ropes, the 10 killed when the engineer lost control of the hoisting engine, the 4 killed by the cages being wrecked, the 2 killed when a cage got out of the guides while being lowered, the 3 killed by the brake on the drum failing to work, the 13 killed by the bottom falling out of the cage while it was being lowered, the 65 killed by objects falling on them from the top or intermediate points, the 12 killed by platforms breaking.

During the forty-five years, from 1870 to 1914 inclusive, 18,370 were killed inside and outside the Anthracite mines. Of these only 607 or 3.32 per cent., as shown in the table, were killed in shaft accidents. When it is understood that many millions of persons were lowered and hoisted into and out of the mines during the period mentioned, the number of fatalities in the shafts was very small. The number over which the victims had no control was only 138 or $\frac{3}{4}$ of 1 per cent. of the total. It would seem that the safest place in the mine is on the cage.

CAUSES AND LOCATION OF FATAL ACCIDENTS

The records for the year show that as usual the two principal causes of fatal accidents in the anthracite mines were (1) falls of coal, slate and roof, and (2) cars. The total number of inside fatal accidents was 534, of which 231, or 43.26 per cent., were caused by falls of coal, slate and roof, and 76 or 14.23 per cent. by cars. The

other causes were explosions of gas, 43 or 8.05 per cent.; explosions of powder and dynamite, 13 or 2.44 per cent.; electricity, 3 or .56 per cent.; blasts, 76 or 14.23 per cent.; falling into shafts, suffocation by gas and miscellaneous causes, 92 or 17.23 per cent.

The accidents by falls of coal occurred as follows: At face of working places, 45; at pillar work, 8; on gangways while timbering and repairing, 1; in crosscuts, 1; in pump house, 1; a total of 56, or 24.24 per cent. By falls of slate at face of workings, 30; at pillar work, 5; on gangways while timbering and repairing, 3; in crosscuts, 1; a total of 39, or 16.88 per cent. By falls of roof at face of workings, 95; at pillar work, 23; on gangways while timbering and repairing, 10; on gangways while riding on cars, 3; on gangway while going out of mine, 1; on slopes, 2; in tunnel while riding on cars, 1; in old workings, 1; a total of 136, or 58.88 per cent.

The total number of fatal accidents by falls of coal, slate and roof at face of working places was 170, or 73.59 per cent.; at pillar work, 36 or 15.59 per cent.; on gangways while timbering and repairing, 14 or 6.06 per cent.; on gangways while riding on cars, 3 or 1.30 per cent.; in crosscuts, 2 or .87 per cent.; in pump house, 1 or .43 per cent.; on slopes, 2 or .87 per cent.; in tunnel while riding on cars, 1, or .43 per cent.; on gangway while going out of mine, 1 or .43 per cent.; in old workings, 1, or .43 per cent.

Seventy-six persons were killed by cars, 45 of whom were killed on gangways, 18 on slopes and 13 at other places.

Seventy-six persons were killed by blasts, and thirteen were killed by explosions of powder and dynamite on gangways and at other places.

Of the accidents on the surface, 33 or 50.00 per cent. were caused by cars; 12, or 18.18 per cent. by machinery, and 21, or 31.82 per cent. by other causes.

The table submitted herewith shows the accidents in each inspection district by falls and other causes.

These reports show 141 miners killed by falls: 109 or 77.30 per cent. were killed at face of working places; 26 or 18.44 per cent. while removing pillars; 3 or 2.13 per cent. on gangways while timbering and repairing; 1 or .71 per cent. on gangways while riding on cars and 2 or 1.42 per cent. in crosscuts. Of the 141 fatalities, 92 or 65.25 per cent. were due to the carelessness of the victims; 11 or 7.80 per cent. to the carelessness of others, and 38 or 26.95 per cent. were unavoidable.

Eight miners were killed by mine cars; 4 or 50.00 per cent. on gangways and 4 or 50.00 per cent. on slopes. Of the 8 fatalities, 7 or 87.50 per cent. were due to the carelessness of the victims, and 1 or 12.50 per cent. was unavoidable.

Twenty-three miners were killed by explosions of gas: 20 or 86.96 per cent. of whom were in chambers; 1 or 4.35 per cent. in old workings and 2 or 8.69 per cent. in airway. Of the 23 fatalities, 20 or 86.96 per cent. were due to the carelessness of the victims, and 3 or 13.04 per cent. to the carelessness of others.

Eleven miners were killed by explosions of powder and dynamite: 9 or 81.82 per cent. were killed at face of workings and 2 or 18.18 per cent. in crosscuts. Of the 11 fatalities, 10 or 90.91 per cent. were due to the carelessness of the victims, and 1 or 9.09 per cent. was unavoidable.

Sixty-two miners killed by blasts. Of the 62 fatalities, 59 or 95.16 per cent. were due to the carelessness of the victims, and 3 or 4.84 per cent. were unavoidable.

Nineteen miners killed, falling down shafts. Of the 19 fatalities, 1 or 5.26 per cent. was due to the carelessness of the victim and 18 or 94.74 per cent. to the carelessness of others.

One miner killed, falling down chute, through his own carelessness.

Two miners killed, falling down chamber, through their own carelessness.

Seven miners killed falling down manway. Of the 7 fatalities, 2 or 28.57 per cent. were due to the carelessness of the victims, and 5 or 71.43 per cent. were unavoidable.

One miner killed, crushed at battery; the accident was unavoidable.

One miner killed by electricity on gangway, through his own carelessness.

Four miners suffocated by gas. Of the 4 fatalities, 1 or 25.00 per cent. was due to the carelessness of the victim, and 3 or 75.00 per cent. to the carelessness of others.

One miner suffocated by rush of coal on gangway, through the carelessness of others.

Two miners suffocated by rush of coal on manway, through the carelessness of others.

Two miners suffocated by rush of coal in chute, through the carelessness of others.

Five miners killed, struck by posts; 3 or 60.00 per cent. due to the carelessness of the victims, and 2 or 40.00 per cent. were unavoidable.

One miner killed, struck by rock rolling off the gob, through the carelessness of others.

One miner killed, struck by slate, knocking him down chute, through his own carelessness.

One miner killed, knocked down chute by concussion from explosion of gas, through the carelessness of others.

Three miners killed, crushed by rush of coal and gob on gangway, through the carelessness of others.

The total number of miners killed was 296, of whom 199 or 67.23 per cent. were killed through their own carelessness; 27 or 9.12 per cent. through the carelessness of others, and 70 or 23.65 per cent. were unavoidable.

Seventy-six miners' laborers killed by falls, 60 or 78.95 per cent. of whom were killed at face of workings; 10 or 13.16 per cent. while removing pillars; 5 or 6.58 per cent. on gangways while timbering and repairing, and 1 or 1.31 per cent. while remodeling pump house. Of the 76 fatalities, 35 or 46.05 per cent. were due to carelessness of the victims, and 41 or 53.95 per cent. were unavoidable.

Eight miners' laborers killed by cars, 4 or 50.00 per cent. of whom were killed on gangways; 1 or 12.50 per cent. in chamber; 2 or 25.00 per cent. on slopes and 1 or 12.50 per cent. in tunnel. Of the 8 fatalities, 5 or 62.50 per cent. were due to the carelessness of the victims, and 3 or 37.50 per cent. were unavoidable.

Fifteen miners' laborers killed by explosions of gas, 9 or 60.00 per cent. of whom were killed in chambers; 1 or 6.67 per cent. in

old workings; 1 or 6.67 per cent. on plane, and 4 or 26.66 per cent. in airway. Of the 15 fatalities, 7 or 46.67 per cent. were due to the carelessness of the victims, 5 or 33.33 per cent. to the carelessness of others, and 3 or 20.00 per cent. were unavoidable.

Nine miners' laborers were killed by blasts. Of the 9 fatalities, 7 or 77.78 per cent. were due to the carelessness of the victims, 1 or 11.11 per cent. to the carelessness of others, and 1 or 11.11 per cent. was unavoidable.

One miners' laborer killed by explosion of powder and dynamite in chamber, through his own carelessness.

One miners' laborer suffocated by gas, through his own carelessness.

One miners' laborer suffocated by rush of coal in chute, through his own carelessness.

Five miners' laborers killed by falling down shaft: 1 or 20.00 per cent. was due to the carelessness of the victim, and 4 or 80.00 per cent. to the carelessness of others.

One miner's laborer killed by falling down manway; accident was unavoidable.

Two miners' laborers killed, struck by posts: 1 or 50.00 per cent. was due to the carelessness of the victim, and 1 or 50.00 per cent. to the carelessness of others.

One miners' laborer killed, struck by piece of rock sliding off the gob, through his own carelessness.

One miners' laborer killed, struck by lever while putting car on track; accident was unavoidable.

One miners' laborer killed, struck by rock rolling down slope, through the carelessness of others.

One miners' laborer killed by concussion from explosion of powder on gangway, through the carelessness of others.

One miners' laborer scalded by steam in pump room; accident was unavoidable.

Two miners' laborers electrocuted on gangway, through their own carelessness.

The total number of miners' laborers killed was 126, 62 or 49.21 per cent. of whom were killed through their own carelessness, 13 or 10.32 per cent. through the carelessness of others, and 51 or 40.47 per cent. were unavoidable.

Twenty-eight drivers and runners were killed. Of this number 1 or 3.50 per cent. was killed by fall on gangway while riding on cars; 16 or 57.15 per cent. were killed by cars on gangway; 1 or 3.57 per cent. by cars in chamber; 1 or 3.57 per cent. by cars in tunnel; 1 or 3.57 per cent. by cars near foot of car hoist; 1 or 3.57 per cent. by explosion of gas in tunnel; 1 or 3.57 per cent. by explosion of gas in chamber; 1 or 3.57 per cent. by explosion of gas in airway; 2 or 7.15 per cent. by blasts; 1 or 3.57 per cent. kicked by mule; 1 or 3.57 per cent. struck by chute on gangway and 1 or 3.57 per cent. by falling down shaft. Of the 28 fatalities, 20 or 71.43 per cent. were due to the carelessness of the victims, 3 or 10.71 per cent. to the carelessness of others, and 5 or 17.86 per cent. were unavoidable.

Sixteen company men were killed. Of this number, 1 or 6.25 per cent. was killed by fall at face of working place; 2 or 12.50 per cent. by fall on gangway; 4 or 25.00 per cent. by cars on gangways; 3 or

18.75 per cent. by cars on slopes; 1 or 6.25 per cent. by explosion of gas in chamber; 1 or 6.25 per cent. by explosion of gas in old workings; 1 or 6.25 per cent. by explosion of blast; 1 or 6.25 per cent. by explosion of powder and dynamite; 1 or 6.25 per cent. crushed at battery; 1 or 6.25 per cent. suffocated in car of coal that he was loading under a chute on gangway. Of the 16 fatalities, 10 or 62.50 per cent. were due to the carelessness of the victims, and 6 or 37.50 per cent. were unavoidable.

Sixty-eight other persons were killed, including 2 assistant mine foremen, 4 fire bosses, 2 pumpmen, 8 doorboys and helpers, 3 engineers, 8 footmen, 5 brakemen, 7 loaders, 3 timbermen, 2 starters, 2 muckers, 2 motormen, 1 topman, 1 repairman, 1 bottomman, 1 shaftman, 1 wheelman, 1 machinist, 1 slope-tender, 1 trackman, 1 headman, 1 pipeman, 1 assistant surveyor, 1 track-helper, 1 machinist helper, 1 rock unloader, 1 motor runner, 1 motor conductor, 1 doorman, 1 chainman, 1 poleman and 1 rockman. Of the 68 fatalities, 43 or 63.24 per cent. were due to the carelessness of the victims, 4 or 5.88 per cent. to the carelessness of others, and 21 or 30.88 per cent. were unavoidable.

Of the 534 accidents that occurred inside the mines, 334 or 62.55 per cent. are attributed to the carelessness of the victims themselves, 47 or 8.80 per cent. to the carelessness of others, and 153 or 28.65 per cent. to unavoidable accidents.

Causes and Location of Fatal Accidents, by Districts, 1914

	Districts																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Totals
Inside																						
Falls of coal at face,	3	....	....	....	2	4	8	....	4	5	3	2	1	2	1	3	1	1	3	1	1	45
Falls of coal at pillar work,	....	....	....	....	....	....	....	2	....	2	1	1	....	....	1	....	....	....	1	....	....	8
Falls of coal in heading,	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
Falls of coal on gangway while timbering and repairing,	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Falls of coal in pump house,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1
Falls of slate at face,	....	....	....	....	....	....	5	2	2	....	4	....	....	....	3	3	....	5	5	1	....	30
Falls of slate at pillar work,	....	....	....	....	....	....	1	....	....	....	3	....	....	....	1	....	....	....	....	....	....	5
Falls of slate on gangway while timbering and repairing,	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	1	....	....	....	3
Falls of slate in heading,	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Falls of roof at face,	11	12	6	8	4	14	4	10	6	7	....	....	2	1	....	2	2	....	....	1	5	95
Falls of roof at pillar work,	7	....	....	1	4	2	....	1	....	2	....	....	....	1	....	3	....	....	....	....	2	23
Falls of roof on gangway while timbering and repairing,	....	....	....	....	....	....	2	2	1	2	....	1	....	....	....	....	2	....	....	....	....	10
Falls of roof on gangway while riding on cars,	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	1	3
Falls of roof on gangway going out of mine,	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Falls of roof in tunnel while riding on cars,	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1
Falls of roof in old workings,	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Falls of roof on slope,	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	2
Cars on gangway,	2	4	2	....	....	1	3	3	3	3	2	4	1	1	3	....	5	2	2	1	3	45
Cars in chamber,	4	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	6
Cars on slope,	1	....	....	1	1	3	4	1	1	1	3	....	....	....	1	....	....	....	1	....	....	18
Cars on plane,	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1
Cars in tunnel,	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	1	....	3
Cars at foot of car hoist,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
Cars at foot of shaft,	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Cars at foot of slope,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1
Explosions of gas in chamber,	....	....	....	....	....	1	6	....	5	2	....	2	2	1	4	2	2	2	1	1	....	31
Explosions of gas in tunnel,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
Explosions of gas on plane,	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Explosions of gas in airway,	....	....	....	....	....	1	2	....	....	....	....	....	....	....	....	....	7	....	....	....	....	7
Explosions of gas in old workings,	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	3
Suffocated by gas in chamber,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	1	....	....	....	4
Suffocated by gas in heading,	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Suffocated by rush of coal on gangway,	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1
Suffocated by rush of coal in manway,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	2

Causes and Location of Fatal Accidents, by Districts, 1914—Continued

	Districts																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Totals
Inside																						
Suffocated by rush of coal in chute,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....	....	3
Suffocated in car of coal on gangway,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
Explosions of powder and dynamite at face,	1	1	1	2	1	....	....	....	1	....	....	1	....	....	....	1	....	2	....	....	....	11
Explosions of powder and dynamite in heading,	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Explosions of blasts,	3	6	4	6	2	9	7	10	4	5	....	2	3	1	2	4	....	3	2	....	3	76
Falling down shafts,	....	....	15	....	....	1	1	2	1	....	....	....	....	....	....	....	....	6	4	....	....	30
Falling into slopes, etc.,	....	....	....	....	....	....	1	....	....	1	1	2	2	....	3	6	1	....	....	....	....	17
Crushed at batteries,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	1	....	....	....	3
Animals,	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	2
Machinery,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
Electricity,	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	3
Struck by coal,	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	2
Struck by slate,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1
Struck by rock,	....	....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	3
Struck by chute,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	2
Struck by lever,	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Struck by timber,	....	....	....	....	....	1	2	....	3	....	1	....	1	....	2	....	....	....	....	....	....	10
Struck by pulley,	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1
Rush of coal,	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	1	....	....	3
Rush of gob,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	2
Concussion from explosion of powder,	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Scalded by steam,	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	37	24	28	18	15	42	51	35	34	32	21	17	14	9	25	29	31	24	24	10	16	534
Outside																						
Cars,	....	....	1	1	....	1	1	1	....	1	6	....	7	3	....	....	5	....	2	1	3	33
Machinery,	....	....	....	....	....	2	....	1	2	....	3	1	1	....	....	1	1	....	....	....	....	12
Electricity,	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Falling off slate tower,	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Falling off chute,	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1
Struck by barrel falling off breaker,	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Struck by timber,	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	1	....	....	1	....	4
Struck by frozen clay,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
Struck by frozen coal,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
Struck by rock,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
Burned by culm dust,	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1

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CAUSES AND LOCATION OF FATAL ACCIDENTS, 1910-1914, INCLUSIVE

This table shows that the causes of accidents and the places they occur are very much the same from year to year. This is especially true of falls of coal, slate and roof that occur at the face, while removing pillars, while repairing gangways or while working at the face of gangways.

The accidents by cars and the explosions of blasts occur from year to year in about the same way and at the same relative places.

During the period covered by the table 1,244 fatal accidents inside were caused by falls or 45.85 per cent. of the total number; 424 by cars, or 15.63 per cent. of the total number; 316 by blasts, or 11.65 per cent. of the total number; 92 by powder explosions, or 3.39 per cent. of the total number, and only 180 by explosions of gas, or 6.64 per cent. of the total number.

Most of the victims could have been saved had they used proper precaution.

The accidents from blasts and explosives number about 15 per cent. and are chargeable directly to the miner who extracts the coal. Of the 1,668 accidents by falls and cars, at least one-half could have been prevented by proper prudence and care.

Causes and Location of Fatal Accidents Inside, 1910-1914, Inclusive

	1910	1911	1912	1913	1914	Totals	Percentages as to location	Percentages of total
By falls of coal, slate and roof								
At face of working places,	173	166	153	197	170	859	69.05	31.66
At pillar work,	31	44	37	34	36	182	14.63	6.71
On gangway while timbering and repairing,	24	20	36	14	13	107	8.60	3.95
Back in chambers,	21	15	4	.....	.....	40	3.22	1.47
On slopes,	2	1	1	2	3	9	.72	.33
At cross headings,	2	2	4	4	2	14	1.13	.51
In old workings,	.....	1	3	.....	1	5	.40	.19
In chutes,	.....	1	4	.....	.....	5	.40	.19
In tunnels,	.....	1	.....	1	.....	2	.16	.07
In strange chambers,	.....	2	.....	.....	.....	2	.16	.07
In airways,	.....	.....	1	2	.....	3	.24	.11
At bottom of slopes,	.....	.....	1	1	.....	2	.16	.07
On planes,	.....	.....	1	.....	.....	1	.08	.04
In sumps,	.....	.....	1	.....	.....	1	.08	.04
While riding on cars on gangway,	.....	.....	.....	6	5	11	.89	.40
In pump house,	.....	.....	.....	.....	1	1	.08	.04
Totals and percentages,	253	253	246	261	231	1,244	100.00	45.85
By cars								
On gangways,	57	47	55	40	45	244	57.55	8.99
In chambers,	6	11	2	9	6	34	8.02	1.25
On slopes,	17	18	14	20	18	87	20.52	3.21
At foot of shafts,	2	4	2	2	1	11	2.59	.41
At foot of slopes,	8	5	2	4	2	21	4.95	.77
At dump chutes,	2	2	.....	.....	.....	4	.94	.15
In tunnels,	.....	3	1	6	3	13	3.07	.48
At mouth of drifts,	.....	1	.....	.....	.....	1	.24	.04
On planes,	.....	1	2	5	1	9	2.12	.33
Totals and percentages,	92	92	78	86	76	424	100.00	15.63

Causes and Location of Fatal Accidents Inside, 1910-1914, Inclusive—Continued

	1910	1911	1912	1913	1914	Totals	Percentages as to location	Percentages of total
By explosions of gas								
In chambers,	14	13	22	20	31	100	55.56	3.69
On gangways,	3	9	3	2	.....	17	9.44	.63
In old workings,	2	3	9	4	3	21	11.67	.77
On slopes,	1	.....	.....	1	1	3	1.67	.11
In cross headings,	.....	4	.....	1	.....	5	2.78	.19
In tunnels,	.....	5	.....	20	1	26	14.44	.96
In manways,	.....	.....	1	.....	7	8	4.44	.29
Totals and percentages,	20	34	35	48	43	180	100.00	6.64
Suffocated by gas, etc.,	13	*86	5	10	12	126	100.00	4.64
By explosions of powder and dynamite								
At face of working places,	9	6	9	8	11	43	46.74	1.59
On gangways,	.....	13	12	1	.....	26	28.26	.96
In cross headings,	7	2	4	1	2	16	17.39	.59
In tunnels,	1	.....	.....	1	.....	2	2.17	.07
Location not given,	5	.....	.....	.....	.....	5	5.44	.18
Totals and percentages,	22	21	25	11	13	92	100.00	3.39
By explosions of blasts								
At face of working places,	48	59	46	52	76	281	88.92	10.35
On gangways,	6	1	.....	3	.....	10	3.17	.37
At pillar work,	4	1	.....	.....	.....	5	1.58	.19
In cross headings,	1	6	4	5	.....	16	5.06	.59
In tunnels,	1	.....	.....	.....	.....	1	.32	.04
In old workings,	.....	.....	1	.....	.....	1	.32	.04
On planes,	.....	.....	.....	2	.....	2	.63	.07
Totals and percentages,	60	67	51	62	76	316	100.00	11.65
Falling into shafts, slopes, etc.,	19	21	18	30	47	135	.....	4.98
Crushed at batteries,	3	5	4	3	3	18	.....	.66
By electricity,	3	2	5	1	1	12	.....	.44
By machinery,	2	4	.....	2	.....	8	.....	.30
Miscellaneous causes,	22	30	31	43	32	158	.....	5.82
Grand totals and percentages,	509	615	498	557	534	2,713	.....	100.00

*Pancoast disaster: 72 men killed.

COMPARATIVE TABLE OF ACCIDENTS

Pennsylvania—United States, 1899-1903-1908-1914

In 1899 the number of employes inside and outside the mines of the United States, not including the bituminous and anthracite mines of Pennsylvania, was 178,526. The production of coal was 120,155,918 net tons. The number of lives lost was 497 or 2.78 per 1,000 employes. The number of lives lost per 1,000,000 tons produced was 4.14, and for every life lost 241,763 tons were produced.

In 1899 the number of employes inside and outside the anthracite mines of Pennsylvania was 140,604. The production of coal was 60,518,331 tons. The number of lives lost was 461 or 3.28 per 1,000 employes. The number of lives lost per 1,000,000 tons produced was 7.62, and for every life lost 131,276 tons were produced.

In 1903 the number of employes inside and outside the mines of the United States was 262,688, not including any Pennsylvania mines, an increase of over 47 per cent. over 1899. The production was 178,409,849 tons, an increase of over 48 per cent. The number of lives lost was 832, an increase of over 67 per cent.

In 1903, the number of employes inside and outside the anthracite mines of Pennsylvania was 151,827, an increase of over 7 per cent. over 1899. The production was 75,232,585 tons, an increase of over 24 per cent. The number of lives lost was 518, an increase of over 12 per cent.

In 1908 the number of employes inside and outside the mines of the United States was 334,095, not including any Pennsylvania mines, an increase of over 87 per cent. over 1899. The production was 217,362,080 tons, an increase of over 80 per cent. The number of lives lost was 1,199, an increase of over 141 per cent.

In 1908 the number of employes inside and outside the anthracite mines of Pennsylvania was 174,503, an increase of over 24 per cent. over 1899. The production was 83,543,243 tons, an increase of over 38 per cent. The number of lives lost was 678, an increase of over 47 per cent.

In 1914, the number of employes inside and outside the mines of the United States, not including any Pennsylvania mines, was 365,931, an increase of over 104 per cent. over 1899. The production was 272,925,829 tons, an increase of over 127 per cent. The number of lives lost was 1,438, an increase of over 189 per cent.

In 1914 the number of employes inside and outside the anthracite mines of Pennsylvania was 180,899, an increase of over 28 per cent. over 1899. The production was 91,189,641, an increase of over 50 per cent. The number of lives lost was 600, an increase of over 30 per cent.

During the sixteen years, 1889-1914, inclusive, the number of employes inside and outside the mines of the United States, not including any Pennsylvania mines, was 5,209,421. The production was approximately 3,430,741,947 tons. The number of lives lost was 19,066 or 3.66 per 1,000 employes and 5.56 per 1,000,000 tons produced. The production per life lost was 179,940 tons.

During the same period, the number of employes in the anthracite mines of Pennsylvania was 2,615,096. The production was 1,217,598,943 tons. The number of lives lost was 9,077, or 3.47 per 1,000 employes and 7.45 per 1,000,000 tons produced. The production per life lost was 134,141 tons.

If the fatal accidents in the anthracite mines of Pennsylvania had averaged the same as in the United States, the number would have been 9,571 instead of 9,077, an increase of 494 accidents. If the fatal accidents in the United States had averaged the same as in Pennsylvania, the number would have been 18,077 instead of 19,066, a decrease of 989.

Comparative Table of Accidents, 1899-1914, Inclusive

Years	United States						Pennsylvania					
	Production	Employes	Fatal accidents	Lives lost per 1,000 employes	Lives lost per tons produced 1,000,000	Production per life lost	Production	Employes	Fatal accidents	Lives lost per 1,000 employes	Lives lost per tons produced 1,000,000	Production per life lost
1899,	120,155,918	178,526	497	2.78	4.14	214,763	60,518,331	140,604	461	3.28	7.62	131,276
1900,	133,002,269	195,922	816	4.16	6.13	162,993	57,363,396	143,824	411	2.86	7.16	139,570
1901,	145,290,915	220,392	735	3.33	5.06	197,675	67,094,665	147,651	513	3.47	7.65	130,789
1902,	161,720,382	234,447	1,139	4.86	7.04	141,985	41,340,935	148,139	300	2.03	7.26	137,803
1903,	178,409,849	262,688	832	3.17	4.67	214,435	75,232,585	151,827	518	3.41	6.89	145,237
1904,	178,621,862	276,616	873	3.16	4.89	204,607	73,594,369	161,330	595	3.69	8.08	123,688
1905,	194,714,101	292,840	1,109	3.79	5.70	175,576	78,647,020	168,254	644	3.83	8.19	122,123
1906,	212,484,779	301,677	1,082	3.59	5.09	196,381	72,139,510	166,175	557	3.35	7.72	129,514
1907,	244,747,965	328,597	1,683	5.12	6.88	145,424	86,056,412	168,774	708	4.20	8.23	121,549
1908,	217,362,080	334,095	1,199	3.59	5.52	181,286	83,543,243	174,503	678	3.88	8.12	123,220
1909,	244,385,088	309,439	1,595	5.15	6.53	153,219	80,223,833	171,195	567	3.31	7.07	141,488
1910,	269,141,526	363,367	1,700	4.68	6.32	158,319	83,683,994	168,175	601	3.57	7.18	139,241
1911,	263,114,663	372,357	1,505	4.04	5.72	174,827	90,917,176	173,338	699	4.03	7.69	130,067
1912,	289,209,219	364,922	1,313	3.60	4.54	220,266	84,426,869	175,098	601	3.43	7.12	140,477
1913,	305,455,502	382,425	1,550	4.05	5.07	197,068	91,626,964	175,310	624	3.56	6.81	146,838
1914,	*272,925,829	365,931	1,438	3.93	5.27	189,795	91,189,641	180,899	600	3.32	6.58	151,982
Totals and averages,	3,430,741,947	5,209,421	19,066	3.66	5.56	179,940	1,217,598,943	2,615,096	9,077	3.47	7.45	134,141

*Estimated.

Table showing companies that had fatal accidents inside or outside their mines; causes of accidents, fatalities per 1,000 employes and per 1,000,000 tons produced, 1914

Companies	Production net tons	Employes inside	Causes of Fatal Accidents Inside				Total fatal accidents inside	Fatalities inside per 1,000 employes	Fatalities inside per 1,000,000 tons produced	Employes outside	Causes of Fatal Accidents Outside				Total fatal accidents outside	Grand total fatal accidents inside and outside	Grand total employes	Fatalities inside and outside per 1,000 employes	Fatalities inside and outside per 1,000,000 tons produced
			Falls	Cars	Gas	Miscellaneous causes					Cars	Machinery	Electricity	Miscellaneous causes					
Philadelphia and Reading Coal and Iron Company,	11,412,037	19,043	21	9	5	20	55	2.89	4.82	7,250	5	3	....	....	8	63	26,293	2.40	5.52
Delaware, Lackawanna and Western Railroad Company,	10,548,890	16,856	26	7	6	31	70	4.15	6.64	3,419	2	....	1	2	5	75	20,275	3.70	7.11
Lehigh Valley Coal Company,	8,787,326	11,468	30	12	2	17	61	5.32	6.94	4,108	3	2	....	4	9	70	15,576	4.49	7.97
Delaware and Hudson Company,	7,461,993	11,488	27	4	....	12	43	3.74	5.76	3,244	....	1	....	1	2	45	14,732	3.05	6.03
Lehigh and Wilkes-Barre Coal Company,	6,470,126	8,761	12	7	6	11	36	4.11	5.56	2,184	....	....	....	....	....	36	10,945	3.29	5.56
Pennsylvania Coal Company,	6,200,145	9,576	16	7	1	10	34	3.55	5.49	3,067	....	....	....	1	1	35	12,643	2.77	5.64
Susquehanna Coal Company,	5,385,477	8,703	12	6	7	16	41	4.71	7.61	3,753	2	....	....	1	3	44	12,456	3.53	8.21
Lehigh Coal and Navigation Company,	4,749,672	5,842	6	6	9	9	30	5.14	6.31	2,480	5	1	....	2	8	38	8,322	4.57	8.00
Scranton Coal Company,	2,402,552	3,883	13	2	....	4	19	4.89	7.91	1,373	....	....	....	....	....	19	5,256	3.61	7.91
G. B. Markle Company,	1,909,498	1,787	4	....	....	....	4	2.24	2.09	752	3	....	....	....	3	7	2,539	2.76	3.67
Hudson Coal Company,	1,826,348	2,923	6	....	1	5	12	4.11	6.57	821	1	1	....	....	2	14	3,744	3.74	7.66
Hillside Coal and Iron Company,	1,778,791	3,108	6	1	....	1	8	2.58	4.49	954	1	....	....	1	2	10	4,062	2.46	5.62
Kingston Coal Company,	1,707,559	2,410	5	2	....	6	13	5.39	7.61	740	....	1	....	....	1	14	3,150	4.44	8.20
Coxe Brothers and Company, Incorporated,	1,631,431	1,783	1	1	....	1	3	1.68	1.84	768	1	1	....	2	4	7	2,551	2.74	4.29
Temple Coal Company,	753,368	983	2	1	....	1	4	4.07	5.31	266	....	....	....	....	....	4	1,249	3.20	5.31
West End Coal Company,	718,094	946	1	1	....	....	2	2.11	2.79	270	....	....	....	....	....	2	1,216	1.64	2.79
A. Pardee and Company,	670,841	1,082	1	....	....	....	1	.92	1.49	487	....	....	....	1	1	2	1,569	1.27	2.98
Forty Fort Coal Company,	657,905	1,128	3	....	....	....	3	2.65	4.56	322	....	....	....	....	....	3	1,450	2.07	4.56
Price-Pancoast Coal Company,	624,332	1,165	1	....	....	2	3	2.58	4.80	235	....	....	....	....	....	3	1,400	2.14	4.80
C. M. Dodson and Company,	500,758	492	1	....	....	1	2	4.06	3.99	257	....	....	....	....	....	2	749	2.67	3.99
Dodson Coal Company,	475,237	514	2	....	....	....	2	3.89	4.21	288	....	....	....	....	....	2	802	2.49	4.21
Maryd Coal Company,	421,238	373	1	1	1	7	10	26.81	23.73	177	....	....	....	....	....	10	550	18.18	23.73
Harleigh Brookwood Coal Company,	420,922	575	....	1	....	4	5	8.70	11.88	320	....	....	....	....	....	5	895	5.59	11.88
Mt. Lookout Coal Company,	419,611	683	2	....	....	....	2	2.93	4.77	156	....	....	....	....	....	2	839	2.38	4.77
Pine Hill Coal Company,	390,966	513	3	....	....	4	7	13.64	17.90	194	....	....	....	....	....	7	707	9.90	17.90

Lackawanna Coal Company, Limited,	388,613	569	1	1	....	....	2	3.51	5.15	162	....	....	....	....	....	2	731	2.73	5.15
St. Clair Coal Company,	378,061	400	3	....	....	....	3	7.50	7.94	388	2	....	....	2	4	7	788	8.88	18.52
Alden Coal Company,	369,634	599	1	1	....	....	2	3.34	5.41	181	....	....	....	....	....	2	780	2.56	5.41
Thomas Colliery Company,	358,247	280	....	....	....	1	1	3.57	2.79	210	1	....	....	2	3	4	490	8.16	11.17
Oak Hill Coal Company,	328,655	504	....	....	1	....	1	1.98	3.04	234	....	....	....	....	....	1	738	1.35	3.04
Greenough Red Ash Coal Company,	311,228	378	....	....	....	1	1	2.65	3.21	231	....	....	....	....	....	1	609	1.64	3.21
Plymouth Coal Company,	305,454	659	2	1	....	....	3	4.55	9.82	255	....	....	....	....	....	3	914	3.28	9.82
Estate A. S. VanWickle,	299,897	415	....	....	....	1	1	2.41	3.33	215	....	....	....	....	....	1	630	1.59	3.33
Midvalley Coal Company,	297,928	364	....	....	....	....	....	.....	.....	192	1	....	....	....	1	1	556	1.80	3.36
Colonial Collieries Company,	296,314	410	1	....	....	....	1	2.44	3.37	240	....	....	....	....	....	1	650	1.54	3.37
Mt. Jessup Coal Company, Limited,	291,560	411	1	1	....	1	3	7.30	10.29	282	1	....	....	....	1	4	693	5.77	13.72
Buck Run Coal Company,	290,737	515	....	....	....	2	2	3.88	6.88	149	....	....	....	....	....	2	664	3.01	6.88
Shipman Koal Company,	266,116	469	1	....	1	2	4	8.53	15.03	128	....	....	....	....	....	4	597	6.70	15.03
Excelsior Coal Company,	262,176	454	1	....	....	1	2	4.41	7.62	111	....	....	....	....	....	2	565	3.54	7.62
East Boston Coal Company,	236,270	400	....	....	....	2	2	5.00	8.46	131	1	1	....	....	2	4	531	7.53	16.92
Harwood Coal Company,	234,547	317	1	....	....	....	1	3.15	4.26	135	....	....	....	....	....	1	452	2.21	4.26
Wilkes-Barre Anthracite Coal Company,	229,211	345	3	2	2	1	8	23.19	34.90	64	....	....	....	....	....	8	409	19.56	34.90
Moosic Mountain Coal Company,	228,440	342	1	....	....	1	2	5.85	8.76	53	1	....	....	....	1	3	395	7.59	13.13
Peoples Coal Company,	200,705	334	2	....	....	....	2	5.99	9.97	101	....	....	....	....	....	2	435	4.60	9.97
Traders Coal Company,	178,984	331	1	....	....	....	1	3.02	5.59	73	....	....	....	....	....	1	404	2.47	5.59
J. S. Wentz and Company,	174,860	128	....	....	....	....	....	.....	.....	136	1	1	....	....	2	2	264	7.58	11.43
Locust Mountain Coal Company,	170,881	402	....	....	....	....	....	.....	.....	144	2	....	....	....	2	2	546	3.66	11.70
Archbald Coal Company,	168,745	316	....	1	....	2	3	9.49	17.78	89	....	....	....	....	....	3	405	7.41	17.78
Raub Coal Company,	165,627	377	2	....	....	2	4	10.61	24.15	123	....	....	....	....	....	4	500	8.00	24.15
Wilkes-Barre Colliery Company,	164,895	215	2	....	....	....	2	9.30	12.13	58	....	....	....	....	....	2	273	7.33	12.13
Buck Ridge Coal Mining Company,	141,844	360	....	....	1	2	3	8.33	21.15	95	....	....	....	....	....	3	455	6.59	21.15
George F. Lee Coal Company,	138,088	294	1	....	....	....	1	3.40	7.24	93	....	....	....	....	....	1	387	2.59	7.24
Enterprise Coal Company,	104,298	97	1	....	....	....	1	10.31	9.59	165	....	....	....	....	....	1	262	3.82	9.59
White and Company,	101,609	136	1	....	....	....	1	7.35	9.84	78	....	....	....	....	....	1	214	4.67	9.84
West Nanticoke Coal Company,	86,387	120	2	....	....	....	2	16.66	23.15	26	....	....	....	....	....	2	146	13.70	23.15
Darkwater Coal Company,	81,169	154	....	....	....	1	1	6.49	12.32	86	....	....	....	....	....	1	240	4.17	12.32
E. S. Stackhouse Coal Company,	74,698	142	....	....	....	....	....	.....	.....	39	....	....	....	1	1	1	181	5.52	13.39
Humbert Coal Company,	59,483	80	1	1	....	....	2	25.00	33.62	63	....	....	....	....	....	2	143	13.99	33.62
Eastern Pennsylvania Coal Company,	35,245	30	....	....	....	2	2	66.66	56.74	40	....	....	....	....	....	2	70	28.57	56.74

Note. The average loss of life per 1,000 employes was 3.32, largely in excess of what it should be. This being the case, the companies that show an average less than 2.77 fatalities per 1,000 employes are deserving of commendation.

Five of the companies that produced over 1,000,000 tons have a percentage of 2.77 or lower, while 17 of the smaller producing companies show a record ranging from 1.27 to 2.73, a very creditable record. In some cases 1 serious accident makes it impossible for the company to show a favorable record. No company, however, can be commended that has a record beyond 3.32 lives lost per 1,000 employes.

The companies that show from 3.50 to 9 lives per 1,000 employes, without any unusual catastrophes, are open to criticism for inefficient management.

Table showing number of employes inside between 16 and 21 years, and number of employes outside between 14 and 21 years, 1914

Districts	Inside Employes			Outside Employes			Grand total
	Between 16 and 21 years	Over 21 years	Total	Between 14 and 21 years	Over 21 years	Total	
First,	225	6,444	6,669	375	1,706	2,081	8,750
Second,	360	7,250	7,610	234	1,489	1,723	9,333
Third,	573	5,346	5,919	434	1,257	1,691	7,610
Fourth,	343	6,602	6,945	459	1,184	1,643	8,588
Fifth,	290	4,988	5,278	481	1,145	1,626	6,904
Sixth,	608	9,849	10,457	634	2,260	2,894	13,351
Seventh,	631	8,508	9,139	306	2,139	2,445	11,584
Eighth,	562	6,142	6,704	422	1,579	2,001	8,705
Ninth,	553	7,851	8,404	449	1,816	2,265	10,669
Tenth,	652	7,575	8,227	804	1,708	2,512	10,739
Eleventh,	415	7,372	7,787	684	3,132	3,816	11,603
Twelfth,	414	4,628	5,042	677	1,331	2,008	7,050
Thirteenth,	395	4,271	4,666	693	1,653	2,346	7,012
Fourteenth,	350	3,802	4,152	628	2,023	2,651	6,803
Fifteenth,	477	4,577	5,054	720	1,247	1,967	7,021
Sixteenth,	414	5,092	5,506	515	1,571	2,086	7,592
Seventeenth,	402	6,257	6,659	678	2,244	2,922	9,581
Eighteenth,	212	4,460	4,672	498	1,479	1,977	6,649
Nineteenth,	333	5,159	5,492	593	1,982	2,575	8,067
Twentieth,	515	3,928	4,443	423	1,088	1,511	5,954
Twenty-first,	307	4,941	5,248	444	1,642	2,086	7,344
Totals,	9,031	125,042	134,073	1,151	35,675	46,826	180,899

Note. Of the 9,031 minors between the ages of 16 and 21 years employed inside the mines, 56, or 6.20 per 1,000, lost their lives, an average loss much greater than the general average loss inside per 1,000 employes.

There is no reason for this condition unless it be due to a lack of discipline on the part of the management and to the indiscretion of the young workers.

Of the 1,151 minors between the ages of 14 and 21 years employed on the surface, 20, or 17.37 per 1,000, were killed. This is the worst record for many years and is inexcusable, as the occupation of picking slate from the coal or doing work of a similar kind is not very dangerous.

Nationality of Inside Employes, by Districts, 1914

Nationalities Inside	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth	Twenty-first	Totals inside
American,	1,670	1,734	746	1,534	1,002	1,858	1,614	933	1,590	1,955	1,827	1,339	1,183	1,791	1,747	2,479	2,090	906	1,527	3,403	568	33,496
English,	315	340	264	145	220	244	202	134	253	271	174	80	48	33	41	80	93	29	43	75	156	3,240
Welsh,	244	427	120	465	182	106	427	162	761	308	69	52	60	23	46	55	88	27	153	56	149	3,980
Scotch,	25	47	47	4	31	121	13	26	11	3	21	6	3	5	5	6	20	4	9	.....	8	415
Irish,	274	388	344	441	255	504	236	202	349	86	284	50	60	128	73	46	78	61	88	47	183	4,177
German,	54	172	148	118	35	148	96	89	157	288	169	43	35	78	91	103	38	67	32	53	51	2,065
Slavonian,	239	137	673	220	133	378	284	629	599	443	1,223	189	41	71	102	95	1,648	457	841	117	438	8,948
Italian,	999	141	592	410	924	2,479	250	880	93	606	853	130	100	193	282	220	250	172	294	30	838	10,736
Polish,	1,092	1,748	1,170	2,451	1,370	1,787	1,952	1,563	2,592	4,458	1,484	996	1,143	345	652	824	704	690	446	126	738	28,331
Hungarian,	53	151	251	98	94	200	46	61	53	165	463	3	15	27	365	44	76	56	154	53	119	2,547
Austrian,	559	266	333	139	262	452	659	208	428	884	245	132	183	232	357	567	664	415	507	248	897	8,637
Swedish,	5	1	21	43	4	4	52	.....	1	2	8	.....	.....	.....	.....	.....	.....	.....	2	.....	4	147
Russian,	1,063	655	487	410	629	703	977	504	584	744	223	-386	264	621	807	867	210	421	515	103	468	11,641
Belgian,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	1	.....	.....	1	.....	.....	9
Bohemian,	4	6	.....	.....	6	3	.....	43	1	.....	3	.....	.....	.....	.....	14	3	1	.....	.....	220	304
French,	1	4	2	5	.....	.....	.....	.....	1	1	6	3	.....	2	.....	3	4	1	.....	1	2	36
Finnish,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Canadian,	.....	1	4	.....	1	3	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
Lithuanian,	52	1,370	627	357	.....	1,411	1,240	902	946	690	290	1,574	1,344	563	379	78	337	766	774	131	306	14,117
Greek,	3	9	20	2	.....	51	2	5	4	.....	191	64	149	37	34	5	189	150	26	.....	25	966
Tyrolean,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	166	2	.....	4	104	18	75	128	77	2	.....	576
Danish,	.....	1	.....	1	.....	1	1	.....	.....	6	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	40
Croatian,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	.....	.....	1	3	.....	.....	.....	.....	15
Japanese,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Syrian,	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	6	31	.....	.....	.....	1	3	5	3	.....	51
Montenegrin,	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	42	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	48
Horwat,	.....	.....	.....	.....	.....	.....	.....	196	.....	.....	.....	.....	.....	.....	7	.....	83	.....	.....	.....	.....	286
Totals inside,	6,652	7,598	5,849	6,843	5,148	10,456	8,052	6,537	8,424	10,911	7,787	5,046	4,659	4,153	5,072	5,506	6,659	4,354	5,494	4,448	5,172	134,820

Nationality of Outside Employes, by Districts, 1914

Nationalities Outside	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth	Twenty-first	Totals outside
American,	1,139	1,022	591	900	576	1,108	898	883	1,250	1,784	1,703	1,247	1,371	1,781	1,203	1,517	1,314	1,243	1,414	1,209	854	24,920
English,	21	49	42	45	43	61	39	37	98	121	31	25	39	20	12	55	21	13	45	11	61	894
Welsh,	11	29	29	93	40	39	44	41	107	53	23	10	27	7	13	11	14	5	48	5	33	682
Scotch,	5	16	21	1	28	44	7	7	11	2	4	8	3	3	2	5	3	5	2	1	2	180
Irish,	37	80	186	156	126	91	123	72	65	42	86	8	36	92	30	15	32	14	31	4	36	1,362
German,	17	28	58	61	30	44	60	29	57	164	100	19	16	35	34	43	13	19	20	11	19	877
Slavonian,	74	43	159	106	31	91	142	237	124	97	637	61	60	38	31	38	598	239	262	83	232	3,383
Italian,	309	123	348	123	269	718	46	155	36	271	553	63	174	361	46	24	271	302	94	6	177	4,469
Polish,	201	84	183	129	108	299	135	170	132	570	289	145	166	48	131	133	132	92	148	15	171	3,481
Hungarian,	35	12	51	50	24	68	30	33	12	25	137	19	7	12	187	31	18	50	123	42	22	988
Austrian,	23	179	72	109	113	79	198	97	121	389	45	176	201	81	120	115	260	164	216	66	55	2,879
Swedish,	.....	.....	.....	1	.....	.....	.....	15	.....	1	1	.....	.....	.....	.....	.....	7	.....	.....	1	3	29
Russian,	220	56	77	53	189	199	175	122	111	221	121	115	49	116	70	78	180	74	57	45	176	2,504
Belgian,,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bohemian,	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	.....	1	8	.....	.....	.....	.....	83	95
French,	.....	.....	.....	.....	1	.....	.....	2	.....	2	3	.....	.....	2	2	.....	.....	.....	.....	.....	.....	12
Finnish,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Canadian,	.....	.....	1	.....	4	1	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	11
Lithuanian,	3	17	15	5	17	43	15	60	43	22	22	57	59	35	29	12	21	48	31	2	73	629
Greek,	16	.....	2	28	2	6	9	1	3	.....	35	35	129	22	3	.....	35	27	79	1	.....	433
Tyrolean,	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....	7	1	1	.....	.....	5	.....	29
Danish,	.....	.....	.....	.....	.....	1	.....	.....	.....	10	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	14
Croatian,	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	6
Japanese,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Syrian,	.....	.....	.....	.....	.....	.....	33	.....	.....	.....	.....	23	23	.....	.....	.....	.....	.....	.....	1	.....	80
Montenegrin,	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14
Horwat,	.....	.....	.....	.....	.....	.....	.....	20	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	.....	30
Totals outside,	2,111	1,738	1,751	1,860	1,606	2,892	1,956	1,991	2,170	3,774	3,816	2,011	2,360	2,653	1,931	2,086	2,922	2,295	2,570	1,508	2,000	48,001
Grand totals inside and outside,	8,763	9,336	7,600	8,703	6,754	13,348	10,008	8,528	10,594	14,685	11,603	7,057	7,019	6,806	7,003	7,592	9,581	6,649	8,064	5,956	7,172	182,821

TABLE 1.—Number of minor children killed inside and outside the mines, 1914

Districts	Inside						Outside						Grand totals inside and outside
	Boys 20 years	Boys 19 years	Boys 18 years	Boys 17 years	Boys 16 years	Totals	Boys 20 years	Boys 19 years	Boys 18 years	Boys 17 years	Boys 16 years	Totals	
First,	....	2	3	....	....	5	....	1	....	....	....	1	6
Second,	2	1	....	....	....	3	....	....	....	....	....	....	3
Third,	....	....	....	....	....	....	....	....	1	....	....	1	1
Fourth,	....	....	....	....	....	....	....	....	1	....	....	1	1
Fifth,	1	....	....	1	....	2	....	....	....	....	....	....	2
Sixth,	1	1	1	1	1	5	....	....	....	....	1	1	6
Seventh,	....	....	1	....	1	2	....	....	....	....	....	....	2
Eighth,	2	2	....	....	....	4	....	....	1	....	....	1	5
Ninth,	1	....	3	....	....	4	....	....	1	1	....	2	6
Tenth,	....	4	1	....	....	5	1	....	....	....	....	1	6
Eleventh,	2	....	....	....	....	2	....	....	1	....	....	1	3
Twelfth,	....	....	1	....	....	1	....	....	....	....	....	....	1
Thirteenth,	1	1	....	....	....	2	1	....	1	....	....	2	4
Fourteenth,	2	....	....	....	....	2	1	....	....	....	....	1	3
Fifteenth,	1	1	1	1	....	4	....	....	....	....	....	....	4
Sixteenth,	....	....	1	....	1	2	....	....	....	....	....	....	2
Seventeenth,	....	1	2	1	1	5	....	....	1	2	2	5	10
Eighteenth,	2	....	....	....	....	2	....	....	....	....	....	....	2
Nineteenth,	....	2	....	....	....	2	....	....	1	....	....	1	3
Twentieth,	....	....	....	....	....	....	....	....	....	....	....	....	....
Twenty-first,	....	1	3	....	....	4	....	1	1	....	....	2	6
Totals,	15	16	17	4	4	56	3	2	9	3	3	20	76

TABLE 2.—Fatal accidents inside the mines, production, employes, fatalities per 1,000 employes, production per fatality, fatalities per 1,000,000 tons produced, by counties, 1914

Counties	Fatal Accidents Inside					Production in tons of 2,000 pounds	Employes inside	Lives lost inside per 1,000 employes	Tons of coal produced per life lost inside	Lives lost inside per 1,000,000 tons produced
	By falls	By cars	By explosions of gas	By miscellaneous causes	Totals					
Luzerne,	111	30	18	58	217	36,973,767	51,791	4.18	170,386	5.87
Lackawanna,	62	19	.....	49	130	21,649,788	34,445	3.77	166,537	6.00
Schuylkill,	29	19	9	44	101	19,166,424	25,898	3.90	189,767	5.27
Northumberland,	19	5	7	24	55	6,710,131	11,083	4.96	122,002	8.20
Totals and averages,	221	73	34	175	503	84,500,110	123,217	4.08	167,992	5.95
Carbon,	3	2	7	6	18	3,186,691	5,769	3.12	177,038	5.65
Columbia,	2	.....	.....	1	3	1,066,471	1,366	2.19	355,490	2.81
Dauphin,	.....	.....	2	2	6	1,000,988	1,697	3.54	166,831	5.99
Susquehanna,	3	1	.....	.....	4	658,249	1,204	3.32	164,562	6.08
Sullivan,	.....	.....	.....	.....	.....	643,730	744	.....	.....	.....
Wayne,	.....	.....	.....	.....	.....	133,402	76	.....	.....	.....
Totals and averages,	10	3	9	9	31	6,689,531	10,856	2.86	215,791	4.63
Grand totals and averages,	231	76	43	184	534	91,189,641	134,073	3.98	170,767	5.86

TABLE 3.—Nationality by birth of employes killed by falls, 1914

Nationality	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth	Twenty-first	Totals	Percentages
American,	1	1	....	....	....	2	....	1	1	....	2	....	....	2	1	4	2	1	....	2	....	20	8.65
English,	....	1	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	4	1.73
Welsh,	2	....	....	....	....	....	2	2	1	1	....	....	....	....	....	....	....	....	....	....	....	8	3.46
Irish,	....	2	1	....	1	2	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	8	3.46
German,	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	2	.87
Polish,	2	5	....	6	5	6	8	5	9	13	5	....	2	1	3	4	1	2	1	1	1	80	34.63
Italian,	7	....	....	....	....	6	....	2	....	....	....	....	1	....	2	....	....	....	1	....	1	20	8.66
Slavonian,	3	1	2	....	....	....	1	1	1	2	2	....	....	....	1	....	1	1	5	....	2	23	9.96
Lithuanian,	1	2	1	1	1	5	5	1	....	1	1	4	....	....	....	1	1	3	2	....	....	30	12.99
Austrian	1	....	....	....	1	....	....	....	1	1	1	....	....	1	1	1	....	....	....	....	4	12	5.20
Russian,	4	1	1	1	2	....	5	4	1	....	....	....	....	....	....	1	....	....	....	....	....	20	8.65
Greek,	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	.43
Horwat,	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	.43
Magyar,	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	.43
Croatian,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1	.43
Totals,	21	13	6	9	10	21	21	18	15	20	13	4	3	4	8	11	6	7	9	3	9	231	100.00

TABLE 4.—Nationality by birth of employes killed by falls, 1914

Districts	Foreigners					Totals	Americans*			Totals	Grand totals
	By falls at or near face	By falls while taking out pillars	By falls on gangway while timbering and repairing	By falls on gangway while riding on cars	By falls in tunnel while going out of mine		By falls at or near face	By falls while taking out pillars	By falls on gangway while timbering and repairing		
First,	13	5	....	....	....	18	3	....	....	3	21
Second,	9	....	....	....	....	9	3	....	1	4	13
Third,	5	....	....	....	....	5	1	....	....	1	6
Fourth,	7	1	....	....	....	8	1	....	....	1	9
Fifth,	8	1	....	....	....	9	1	....	....	1	10
Sixth,	15	2	....	....	....	17	4	....	....	4	21
Seventh,	16	1	2	....	....	19	2	....	....	2	21
Eighth,	14	....	....	....	....	14	2	....	2	4	18
Ninth,	12	....	....	....	....	12	....	....	3	3	15
Tenth,	11	3	2	....	1	17	2	....	1	3	20
Eleventh,	9	....	....	1	....	10	3	....	....	3	13
Twelfth,	1	1	2	....	....	4	....	....	....	....	4
Thirteenth,	3	....	....	....	....	3	....	....	....	....	3
Fourteenth,	1	1	....	....	....	2	2	....	....	2	4
Fifteenth,	5	1	1	....	....	7	....	....	1	1	8
Sixteenth,	6	1	....	....	....	7	4	....	....	4	11
Seventeenth,	2	....	2	....	....	4	....	....	2	2	6
Eighteenth,	4	1	1	....	....	6	1	....	....	1	7
Nineteenth,	6	2	1	....	....	9	....	....	....	....	9
Twentieth,	1	....	....	....	....	1	1	....	1	2	3
Twenty-first,	6	1	1	....	....	8	....	1	....	1	9
Totals,	154	21	12	1	1	189	30	1	11	42	231

*English speaking employes including Americans, English, Scotch, Irish, Welsh and Germans.

TABLE 5.—Fatal accidents, production, employes, fatalities inside per 1,000 employes, fatalities inside per 1,000,000 tons produced, by counties and districts, 1914

Counties and Districts	Employes inside	Production	Falls	Cars	Gas	Explosives	Blasts	Electricity	Falling into shafts, slopes, etc.	Machinery	Miscellaneous causes	Total fatal accidents inside	Fatalities inside per 1,000 employes	Fatalities inside per 1,000,000 tons produced	Employes outside	Fatal accidents outside	Total fatal accidents	Total employes	Fatalities inside and outside per 1,000 employes
Luzerne, Lackawanna Susquehanna, Wayne and Sullivan:—																			
First,	6,669	4,488,005	21	7	....	2	3	....	....	.....	2	35	5.25	7.80	2,081	2	37	8,750	4.23
Second,	7,610	4,217,194	13	4	....	1	6	....	....	.....	.....	24	3.15	5.69	1,723	.....	24	9,333	2.57
Third,	5,919	3,636,456	6	2	....	1	4	....	15	.....	.....	28	4.73	7.70	1,691	1	29	7,610	3.81
Fourth,	6,945	4,265,302	9	1	....	2	6	....	....	.....	.....	18	2.59	4.22	1,643	4	22	8,588	2.56
Fifth,	5,278	3,810,079	10	2	....	1	2	....	....	.....	.....	15	2.84	3.94	1,626	1	16	6,904	2.32
Sixth,	10,457	6,343,837	21	5	2	....	9	1	1	.....	3	42	4.02	6.62	2,894	3	45	13,351	3.37
Seventh,	9,139	6,751,423	21	7	9	1	7	....	2	.....	4	51	5.58	7.55	2,445	1	52	11,584	4.48
Eighth,	6,704	4,417,138	18	5	....	....	10	....	2	.....	.....	35	5.22	7.92	2,001	2	37	8,705	4.25
Ninth,	8,404	5,813,767	15	4	5	1	4	....	1	.....	4	34	4.05	5.85	2,265	2	36	10,669	3.37
Tenth,	8,227	5,930,968	20	4	2	....	5	....	1	.....	.....	32	3.89	5.40	2,512	2	34	10,739	3.17
Eleventh,	7,787	6,988,914	13	6	....	....	....	....	1	.....	1	21	2.70	3.00	3,816	10	31	11,603	2.67
Twenty-first,	5,248	3,444,887	9	3	....	....	3	....	....	.....	1	16	3.05	4.64	2,086	3	19	7,334	2.59
Totals and averages,	88,387	60,107,970	176	50	18	9	59	1	23	.....	15	351	3.97	5.84	26,783	31	382	115,170	3.32
Carbon, Schuylkill, Columbia, Northumberland and Dauphin:—																			
Twelfth,	5,042	3,071,044	4	5	2	1	2	....	2	.....	1	17	3.37	5.54	2,008	2	19	7,050	2.69
Thirteenth,	4,666	3,264,667	3	1	2	....	3	....	2	.....	3	14	3.00	4.29	2,346	10	24	7,012	3.42
Fourteenth,	4,152	3,271,959	4	1	1	....	1	....	....	.....	2	9	2.17	2.75	2,651	6	15	6,803	2.20
Fifteenth,	5,664	2,972,160	8	5	4	....	2	....	3	.....	3	25	4.95	6.29	1,967	.....	25	7,021	3.56
Sixteenth,	5,506	3,337,529	11	....	2	1	4	....	6	.....	5	29	5.27	8.69	2,086	1	30	7,592	3.95
Seventeenth,	6,659	5,348,045	6	6	9	....	....	1	1	.....	8	31	4.66	5.80	2,922	10	41	9,581	4.28

Eighteenth,	4,671	3,588,835	7	2	2	2	3	...	6	.....	2	24	5.14	6.70	1,977	.....	24	6,649	3.61
Nineteenth,	5,492	3,874,331	9	4	1	....	2	1	4	1	2	24	4.37	6.19	2,575	4	28	8,067	3.47
Twentieth,	4,443	2,358,101	3	2	2	....	....	....	....	.....	3	10	2.25	4.24	1,511	2	12	5,954	2.02
	45,686	31,081,671	55	26	25	4	17	2	24	1	29	183	4.01	5.89	20,043	35	218	65,729	3.32
Totals and averages, ...																			
	134,073	91,189,641	231	76	43	13	76	3	47	1	44	584	3.98	5.86	46,826	66	600	180,899	3.33
Grand totals and averages, ...																			

TABLE 6.—Fatal accidents, production, employes, fatalities per 1,000 employes, fatalities per 1,000,000 tons produced, by years, 1899-1914, inclusive

Years	Employes inside	Production net tons	Falls	Cars	Gas	Explosives	Blasts	Electricity	Falling into shafts and slopes, etc.	Machinery	Miscellaneous causes	Total fatal accidents inside	Fatalities inside per 1,000 employes	Fatalities inside per 1,000,000 tons produced	Employes outside	Fatal accidents outside	Total fatal accidents	Total employes	Fatalities inside and outside per 1,000 employes
1899,	92,167	60,518,331	226	51	28	11	27	.....	16	....	30	389	4.22	6.43	48,437	72	461	140,604	3.28
1900,	94,140	57,363,396	175	60	38	14	29	.....	19	....	23	358	3.80	6.24	49,684	53	411	143,824	2.86
1901,	98,434	67,094,665	226	69	33	15	36	.....	24	....	38	441	4.48	6.57	49,217	72	513	147,651	3.47
1902,	98,377	41,340,935	116	42	20	19	13	.....	13	....	22	245	2.49	5.93	49,762	55	300	148,139	2.03
1903,	102,055	75,282,585	210	70	26	17	38	1	31	....	33	426	4.17	5.66	49,772	92	518	151,827	3.41
1904,	110,362	73,594,369	238	71	30	35	34	.....	26	....	62	496	4.49	6.74	50,968	99	595	161,330	3.69
1905,	116,371	78,647,020	295	82	33	16	44	2	43	....	36	551	4.73	7.01	51,883	93	644	168,254	3.83
1906,	114,998	72,139,510	214	67	43	28	53	.....	20	2	29	456	3.97	6.32	51,177	101	557	166,175	3.35
1907,	117,849	86,056,412	279	88	44	17	70	3	25	2	73	601	5.10	6.98	50,925	107	708	168,774	4.20
1908,	124,233	83,543,243	284	90	57	23	69	1	22	1	49	596	4.79	7.13	50,270	82	678	174,503	3.88
1909,	123,272	80,223,833	254	71	28	22	47	6	18	1	43	490	3.98	6.11	47,923	77	567	171,195	3.31
1910,	121,542	83,683,994	253	92	20	22	60	3	19	2	38	509	4.19	6.08	46,633	92	601	168,175	3.57
1911,	126,037	90,917,176	253	92	34	21	67	2	21	4	121	615	4.88	6.76	47,301	84	699	173,338	4.03
1912,	127,807	84,426,869	246	78	35	25	51	5	18	....	40	498	3.90	5.90	47,291	103	601	175,098	3.43
1913,	128,667	91,626,964	261	86	48	11	62	1	30	2	56	557	4.33	6.08	46,643	67	624	175,310	3.56
1914,	134,673	91,189,641	231	76	43	13	76	3	47	1	44	534	3.98	5.86	46,826	66	600	180,899	3.32
Totals and averages,	1,830,384	1,217,598,943	3,761	1,185	560	309	776	27	392	15	737	7,762	4.24	6.37	784,712	1,315	9,077	2,615,096	3.47

TABLE 7.—Mines in operation, production, inside employes, fatal accidents inside, production per fatality inside, fatalities inside per 1,000,000 tons produced, by districts, 1914

Districts	Mines in operation	Production in tons of 2,000 pounds	Inside employes	Outside employes	Total number of employes	Fatalities inside	Fatalities outside	Fatalities inside per 1,000 employes	Production per fatality inside	Fatalities inside per 1,000,000 tons produced	Fatalities inside and outside per 1,000 employes
First,	28	4,488,006	6,669	2,081	8,750	35	2	5.25	128,229	7.80	4.23
Second,	25	4,217,194	7,610	1,723	9,333	24	.....	3.15	175,716	5.69	2.57
Third,	24	3,636,456	5,919	1,691	7,610	28	1	4.73	129,873	7.70	3.81
Fourth,	35	4,265,302	6,945	1,643	8,588	18	4	2.59	236,961	4.22	2.56
Fifth,	30	3,810,079	5,278	1,626	6,904	15	1	2.84	253,338	3.94	2.32
Sixth,	41	6,343,837	10,457	2,894	13,351	42	3	4.02	151,044	6.62	3.37
Seventh,	49	6,751,423	9,139	2,445	11,584	51	1	5.58	132,381	7.55	4.48
Eighth,	27	4,417,158	6,704	2,001	8,705	35	2	5.22	126,204	7.92	4.25
Ninth,	46	5,813,767	8,404	2,265	10,669	34	2	4.05	170,993	5.85	3.37
Tenth,	49	5,930,963	8,227	2,512	10,739	32	2	3.89	185,343	5.40	3.17
Eleventh,	73	6,988,314	7,787	3,816	11,603	21	10	2.70	332,805	3.00	2.67
Twelfth,	16	3,071,044	5,042	2,008	7,050	17	2	3.37	180,650	5.54	2.69
Thirteenth,	32	3,264,667	4,666	2,346	7,012	14	10	3.00	233,190	4.29	3.42
Fourteenth,	37	3,271,959	4,152	2,651	6,803	9	6	2.17	363,551	2.75	2.20
Fifteenth,	30	3,972,160	5,054	1,967	7,021	25	.....	4.95	158,886	6.29	3.56
Sixteenth,	41	3,337,529	5,506	2,086	7,592	29	1	5.27	115,087	8.69	3.95
Seventeenth,	36	5,348,045	6,659	2,922	9,581	31	10	4.66	172,518	5.80	4.28
Eighteenth,	45	3,583,835	4,672	1,977	6,649	24	.....	5.14	149,326	6.70	3.61
Nineteenth,	50	3,874,331	5,492	2,575	8,067	24	4	4.37	161,430	6.19	3.47
Twentieth,	24	2,358,101	4,443	1,511	5,954	10	2	2.25	235,810	4.24	2.02
Twenty-first,	38	3,444,887	5,248	2,086	7,334	16	3	3.05	215,305	4.64	2.59
Totals and averages,	781	91,189,641	134,073	46,826	180,899	534	66	3.98	170,767	5.86	3.32

TABLE 8.—Fatal accidents inside the mines and production per accident, by counties, 1899-1914, inclusive

Years	Counties	Number of mines	Number of inside employes	Production in tons of 2,000 pounds	Fatal accidents by falls	Fatal accidents by explosions of gas	Total fatal accidents inside	Production in tons per fatal accident inside	Lives lost per 1,000 employes
1899	Luzerne,	156	33,078	22,287,712	98	16	144	154,776	4.35
1900		152	34,476	21,481,122	57	17	135	159,119	3.91
1901		148	36,019	23,963,869	95	22	182	131,670	5.05
1902		229	35,491	14,577,949	36	7	93	156,752	2.62
1903		233	38,370	27,878,362	75	15	169	164,961	4.40
1904		256	41,603	27,705,288	106	8	200	138,526	4.81
1905		254	43,109	29,992,636	122	14	215	139,501	4.99
1906		271	41,643	26,612,192	84	27	194	137,176	4.66
1907		243	42,022	30,853,087	105	19	223	138,355	5.31
1908		243	46,302	31,728,997	116	34	258	122,981	5.57
1909		241	45,121	30,992,306	112	16	202	153,427	4.48
1910		250	44,383	32,106,979	96	12	215	149,335	4.84
1911		281	46,863	35,061,582	92	18	205	171,032	4.37
1912		311	47,133	32,643,232	83	24	202	161,600	4.29
1913		298	47,943	36,326,287	107	10	211	172,162	4.40
1914		293	51,791	36,973,767	111	18	217	170,386	4.19
	Totals and averages, .	.....	657,347	461,185,367	1,495	277	3,065	150,468	4.66
1899	Lackawanna,	76	22,314	14,838,821	71	2	108	137,397	4.84
1900		83	23,907	13,755,961	55	8	89	154,561	3.72
1901		80	26,207	17,258,125	63	4	109	158,331	4.16
1902		118	25,931	11,851,169	23	.....	43	275,609	1.66
1903		114	27,755	20,046,133	59	3	107	187,347	3.86
1904		115	30,500	19,007,628	62	7	115	165,284	3.77
1905		126	30,853	19,709,164	82	2	127	155,190	4.12
1906		157	31,196	18,840,561	70	4	112	168,219	3.59
1907		155	32,444	22,433,409	87	16	174	128,928	5.36
1908		162	32,296	21,631,995	80	3	141	153,418	4.37
1909		157	33,764	20,489,212	73	1	129	158,831	3.82
1910		157	33,285	21,182,921	87	3	139	152,395	4.18
1911		151	34,069	22,598,414	78	3	218	103,662	6.40
1912		153	34,074	20,617,308	79	4	127	162,341	3.73
1913		156	34,285	21,836,671	83	4	140	155,976	4.08
1914		167	34,445	21,649,788	62	.....	130	166,537	3.77
	Totals and averages, ..	.....	487,225	307,747,280	1,114	64	2,008	153,261	4.12
1899	Schuylkill,	83	20,474	13,694,171	43	8	90	152,157	4.40
1900		82	19,952	12,998,899	32	11	82	158,523	4.11
1901		76	20,415	15,277,658	39	6	93	164,276	4.56
1902		76	20,876	8,622,103	37	3	60	143,702	2.87
1903		76	20,144	16,389,505	44	44	88	186,244	4.37
1904		106	22,272	16,173,158	43	8	107	151,151	4.80
1905		132	25,716	17,975,160	60	11	136	132,170	5.29
1906		153	25,365	16,376,538	32	7	94	174,218	3.71
1907		140	25,181	20,160,970	48	3	123	163,910	4.88
1908		179	26,625	18,196,714	54	17	121	150,386	4.54
1909		178	27,749	16,794,597	35	7	88	190,848	3.42
1910		188	25,302	17,696,013	44	4	94	188,255	3.72
1911		185	26,015	19,234,447	53	6	118	163,004	4.54
1912		213	26,619	17,986,745	55	5	109	165,016	4.09
1913		191	26,768	19,511,483	43	29	134	145,608	5.01
1914		194	25,898	19,166,424	29	9	101	189,767	3.90
	Totals and averages, ..	.....	383,371	266,254,582	691	140	1,638	162,549	4.27

TABLE 8.—Continued

Years	Counties	Number of mines	Number of inside employes	Production in tons of 2,000 pounds	Fatal accidents by falls	Fatal accidents by explosions of gas	Total fatal accidents inside	Production in tons per fatal accident inside	Lives lost per 1,000 employes
1899	Northumberland,	28	9,739	4,860,292	19	2	23	211,317	2.36
1900		27	9,741	4,690,944	15	1	33	142,150	3.39
1901		27	9,867	5,430,991	21	1	36	150,861	3.65
1902		28	9,670	3,162,066	10	10	34	93,002	3.52
1903		26	9,312	5,518,580	21	2	35	157,674	3.76
1904		52	9,248	5,516,647	15	6	39	141,452	4.22
1905		54	9,823	5,483,181	21	5	42	130,552	4.28
1906		70	9,585	5,367,497	17	3	32	167,734	3.34
1907		60	10,653	6,665,392	23	5	45	148,120	4.22
1908		69	10,639	6,067,741	23	3	49	123,831	4.61
1909		67	10,361	5,987,835	25	3	46	130,170	4.44
1910		73	10,665	6,324,317	17	.....	32	197,635	3.00
1911		75	10,772	7,109,372	16	5	39	182,292	3.62
1912		75	11,002	6,851,491	22	1	36	190,319	3.27
1913		70	10,836	7,012,687	20	2	45	155,837	4.15
1914		75	11,083	6,710,131	19	7	55	122,002	4.96
	Totals and averages, ..	.....	162,996	92,759,164	304	56	621	149,371	3.81
1899	Carbon,	11	2,025	1,826,267	2	.....	10	182,627	4.94
1900		11	2,052	1,863,637	1	.....	3	621,212	1.46
1901		10	2,265	1,858,519	3	.....	10	185,852	4.42
1902		10	2,242	1,104,462	1	.....	4	276,116	1.78
1903		15	2,120	2,150,021	2	.....	13	165,386	6.13
1904		20	2,381	2,253,512	2	.....	7	321,930	2.94
1905		23	2,460	2,476,406	.....	.....	9	275,156	3.66
1906		23	2,740	2,240,823	2	1	6	373,470	2.19
1907		30	2,989	2,762,523	3	1	14	197,323	4.68
1908		22	3,531	2,784,946	4	.....	9	309,438	2.55
1909		28	3,492	2,652,997	3	1	16	165,812	4.58
1910		33	3,575	3,214,169	3	1	15	214,278	4.20
1911		31	3,607	3,312,483	6	1	18	184,027	4.99
1912		24	4,083	2,843,376	1	.....	8	355,484	1.96
1913		29	3,930	3,353,277	5	3	15	223,552	3.82
1914		22	5,769	3,186,691	3	7	18	177,038	3.12
	Totals and averages, ..	.....	49,261	39,890,609	41	15	175	229,256	3.55
1899	Columbia,	6	1,346	1,002,469	2	.....	5	200,494	3.71
1900		7	1,163	980,721	3	.....	5	196,144	4.30
1901		5	714	1,209,859	2	.....	4	302,465	5.60
1902		6	1,438	738,070	.....	.....	3	246,023	2.09
1903		5	1,454	1,353,904	.....	.....	3	451,301	2.06
1904		10	1,419	1,151,624	7	.....	10	115,162	7.05
1905		9	1,567	1,229,697	2	.....	7	175,671	4.47
1906		7	1,403	969,065	3	1	7	138,438	4.99
1907		8	1,468	1,188,268	1	.....	4	297,067	2.72
1908		9	1,559	1,182,326	2	.....	5	236,465	3.21
1909		8	1,568	1,093,103	1	.....	2	546,551	1.28
1910		11	1,176	960,145	1	.....	1	960,145	.85
1911		7	1,473	1,193,736	1	.....	1	1,193,736	.68
1912		11	1,440	1,214,527	3	.....	6	202,421	4.17
1913		11	1,393	1,214,648	.....	.....	4	303,662	2.87
1914		11	1,366	1,066,471	2	.....	3	355,490	2.20
	Totals and averages, ..	.....	21,947	17,748,633	30	1	70	253,552	3.19
1899	Dauphin,	2	1,583	817,328	1	.....	8	102,166	5.05
1900		2	1,608	779,135	2	1	8	87,392	4.98
1901		2	1,562	830,572	3	.....	7	118,653	4.48
1902		2	1,120	423,341	.....	.....	1	423,341	.89
1903		2	1,256	732,970	3	.....	5	146,594	3.98
1904		9	1,269	723,414	.....	1	*11	65,765	8.67
1905		10	1,350	723,126	1	1	5	144,625	3.70
1906		10	1,422	734,723	3	.....	3	244,908	2.11
1907		12	1,393	829,980	2	.....	5	165,996	3.59
1908		12	1,481	848,005	1	.....	9	94,223	6.08
1909		12	1,419	932,393	1	.....	2	466,197	1.41
1910		11	1,446	886,192	1	.....	8	110,774	5.53
1911		11	1,530	946,963	4	1	10	94,696	6.54
1912		10	1,606	945,102	.....	1	3	315,034	1.87
1913		13	1,687	1,060,270	2	.....	5	212,054	2.96
1914		10	1,697	1,000,988	2	2	6	166,831	3.54
	Totals and averages, ..	.....	23,429	13,214,502	26	7	96	137,651	4.10

*Williamstown disaster.

TABLE 8.—Continued

Years	Counties	Number of mines	Number of inside employes	Production in tons of 2,000 pounds	Fatal accidents by falls	Fatal accidents by explosions of gas	Total fatal accidents inside	Production in tons per fatal accident inside	Lives lost per 1,000 employes
1899	Susquehanna,	2	941	699,020	.....	.....	.....	.....	.....
1900		2	904	556,003	.....	.....	.....	.....	.....
1901		2	1,104	743,105	.....	.....	.....	.....	.....
1902		2	1,086	452,758	2	.....	2	226,379	1.84
1903		2	1,064	800,773	4	.....	6	133,462	5.64
1904		2	1,102	692,440	2	.....	6	115,407	5.44
1905		2	1,026	680,146	6	.....	6	113,358	5.85
1906		3	1,028	562,103	2	.....	6	93,684	5.84
1907		3	970	644,088	4	.....	12	53,674	12.37
1908		1	1,005	487,900	2	.....	2	243,950	1.99
1909		2	953	589,835	2	.....	3	196,612	3.15
1910		2	971	628,808	4	.....	4	157,202	4.12
1911		3	962	672,600	.....	.....	1	672,600	1.04
1912		3	1,044	582,510	3	.....	7	83,216	6.70
1913		3	1,096	594,764	1	.....	2	297,382	1.83
1914		3	1,204	658,249	3	.....	4	164,562	3.32
	Totals and averages, ..	.....	16,460	10,045,102	35	.....	61	164,673	3.71
1899	Sullivan,	2	322	183,182	1	.....	1	183,182	3.11
1900		2	337	235,112	3	.....	3	78,371	8.90
1901		2	281	152,505	.....	.....	.....	.....	.....
1902		3	523	409,017	3	.....	5	81,803	9.56
1903		3	455	293,442	2	.....	2	146,721	4.40
1904		3	443	294,305	1	.....	1	294,305	2.26
1905		4	331	310,496	1	.....	2	155,248	6.04
1906		4	414	358,627	1	.....	2	179,313	4.83
1907		4	459	433,101	1	.....	1	433,101	2.18
1908		4	583	550,712	2	.....	2	275,356	3.43
1909		4	661	641,216	2	.....	2	320,608	3.03
1910		4	614	632,874	.....	.....	1	632,874	1.63
1911		4	662	717,429	2	.....	4	179,357	6.04
1912		4	677	649,235	.....	.....	.....	.....	.....
1913		4	706	664,063	.....	.....	1	664,063	1.42
1914		4	744	643,730	.....	.....	.....	.....	.....
	Totals and averages, ..	.....	8,212	7,149,046	19	.....	27	264,779	3.29
1899	Wayne,	1	353	309,069	.....	.....	.....	.....	.....
1900		1	11	21,862	.....	.....	.....	.....	.....
1901		1	589	369,462	.....	.....	.....	.....	.....
1902		.....	.....	.....	.....	.....	.....	.....	.....
1903		1	125	68,895	.....	.....	.....	.....	.....
1904		1	125	71,353	.....	.....	.....	.....	.....
1905		1	136	67,008	.....	.....	.....	.....	.....
1906		3	202	71,381	.....	.....	.....	.....	.....
1907		3	270	85,594	.....	.....	.....	.....	.....
1908		2	212	63,906	.....	.....	.....	.....	.....
1909		2	184	50,339	.....	.....	.....	.....	.....
1910		2	125	51,576	.....	.....	.....	.....	.....
1911		2	84	70,150	1	.....	1	70,150	11.91
1912		2	129	92,843	.....	.....	.....	.....	.....
1913		1	23	52,814	.....	.....	.....	.....	.....
1914		2	76	133,402	.....	.....	.....	.....	.....
	Totals and averages, ..	.....	2,644	1,579,654	1	.....	1	1,579,654	.38

TABLE 9.—Miners and miners' laborers employed in the mines; number of fatal accidents per 1,000 employes; average number of days worked by breakers; average production per day, 1882-1914, inclusive

Years	Number of miners employed	Number of miners killed	Number of miners killed per 1,000 employes	Number of miners' laborers employed	Number of miners' laborers killed	Number of miners' laborers killed per 1,000 employes	Average number of days worked by breakers	Average production per day worked by breakers, net tons
1882,	22,843	135	5.91	15,229	56	3.68	218	160,814
1883,	25,319	136	5.37	16,879	67	3.97	232	162,704
1884,	27,100	132	4.87	19,606	81	4.13	192	189,941
1885,	28,305	160	5.65	20,128	86	4.27	204	187,413
1886,	25,970	131	5.04	17,068	68	3.98	196	198,728
1887,	29,558	102	3.45	17,548	57	3.25	208	202,675
1888,	34,547	169	4.89	21,952	87	3.96	218	213,922
1889,	30,564	194	6.36	19,368	79	4.08	197	221,978
Totals and averages, ..	224,146	1,159	5.13	147,778	581	3.93	1,665	192,272
1890,	28,936	146	5.05	18,620	95	5.10	210	214,220
1891,	30,552	180	5.89	19,590	119	6.07	213	233,340
1892,	30,779	180	5.84	22,110	111	5.02	202	253,599
1893,	32,881	195	5.93	22,853	108	4.73	202	261,590
1894,	33,357	218	6.54	23,942	91	3.80	175	291,240
1895,	34,553	179	5.18	24,638	115	4.67	187	304,539
1896,	37,003	204	5.51	26,530	134	5.09	170	316,725
1897,	36,932	210	5.69	27,277	99	3.63	151	348,219
Totals and averages, ..	264,993	1,512	5.71	185,560	872	4.70	1,510	277,934
1898,	36,377	176	4.84	24,060	124	5.15	151	349,753
1899,	36,421	199	5.46	23,946	114	4.75	179	338,091
1900,	36,832	184	4.99	24,613	95	3.86	176	325,928
1901,	37,804	224	5.92	26,265	122	4.64	195	344,075
1902,	36,392	114	3.13	25,443	62	2.44	*116	†356,387
1903,	36,823	204	5.54	27,533	110	4.00	211	356,552
1904,	39,848	233	5.85	31,217	145	4.64	213	345,513
1905,	42,078	308	7.32	31,967	148	4.63	208	378,111
Totals and averages, ..	302,575	1,642	5.43	215,044	920	4.28	1,449	349,301
1906,	41,801	226	5.41	29,652	133	4.48	206	350,192
1907,	43,635	309	7.18	29,984	136	4.54	229	379,103
1908,	44,340	313	7.06	32,853	154	4.68	211	345,940
1909,	44,675	264	5.91	32,232	126	3.91	205	391,336
1910,	43,651	254	5.82	32,040	147	4.59	212	394,736
1911,	45,324	306	6.75	32,905	176	5.35	234	388,536
1912,	44,696	262	5.86	33,438	117	3.50	220	383,758
1913,	44,346	286	6.45	33,973	148	4.36	242	378,624
Totals and averages, ..	351,868	2,220	6.31	257,077	1,137	4.42	1,759	376,528
1914,	45,897	296	6.45	37,030	126	3.40	229	398,208

*Strike during the year.
†Washeries worked during the strike. Time was not computed in the average days worked.

TABLE 10.—Employes inside and outside the mines, number of fatal accidents per 1,000 employes, production per fatality, 1881-1914, inclusive

Years	Inside				Outside			Number of lives lost inside and outside per 1,000 employes
	Employes	Fatal accidents	Lives lost per 1,000 employes	Production of coal in tons of 2,000 pounds for each life lost	Employes	Total accidents	Lives lost per 1,000 employes	
1881,	45,619	234	5.13	146,165	30,412	39	1.28	3.59
1882,	50,764	254	4.92	140,230	31,436	41	1.30	3.54
1883,	56,286	274	4.87	137,764	35,153	49	1.39	3.53
1884,	61,922	286	4.62	127,513	39,151	46	1.17	3.28
1885,	62,901	290	4.61	131,834	37,419	42	1.12	3.31
1886,	63,930	236	3.69	165,046	39,114	43	1.10	2.71
1887,	67,716	270	3.99	156,153	38,801	46	1.19	2.97
1888,	78,688	317	4.03	147,114	43,530	47	1.08	2.98
1889,	74,178	339	4.57	128,763	45,468	58	1.28	3.32
1890,	73,613	323	4.39	139,276	46,306	55	1.19	3.15
Totals and averages, .	635,617	2,823	4.44	1,419,858	386,790	466	1.20	3.22
1891,	76,569	372	4.86	133,606	46,339	56	1.20	3.47
1892,	82,088	361	4.40	141,903	48,212	57	1.18	3.21
1893,	86,287	388	4.49	136,188	51,682	68	1.32	3.30
1894,	87,901	368	4.19	138,497	52,038	78	1.50	3.19
1895,	89,251	354	3.97	160,872	54,454	67	1.23	2.93
1896,	94,798	430	4.54	125,217	55,290	72	1.30	3.34
1897,	95,812	372	3.88	141,347	53,745	51	.95	2.83
1898,	91,171	360	3.95	146,674	51,249	51	.99	2.89
1899,	92,167	389	4.22	155,574	48,437	72	1.49	3.28
1900,	94,140	358	3.80	160,233	49,684	53	1.07	2.86
Totals and averages, .	890,184	3,752	4.21	1,440,111	511,130	625	1.22	3.12
1901,	98,434	441	4.48	152,142	49,217	72	1.46	3.47
1902,	98,377	245	*2.49	168,739	49,762	55	1.11	2.03
1903,	102,055	426	4.17	176,602	49,772	92	1.85	3.41
1904,	110,362	496	4.49	148,376	50,968	99	1.94	3.69
1905,	116,371	551	4.73	142,735	51,883	93	1.79	3.83
1906,	114,998	456	3.97	141,258	51,177	101	1.98	3.35
1907,	117,849	601	5.10	143,189	50,925	107	2.10	4.20
1908,	124,233	596	4.79	140,173	50,270	82	1.63	3.88
1909,	123,272	490	3.98	163,722	47,923	77	1.61	3.31
1910,	121,542	509	4.19	164,409	46,633	92	1.97	3.57
Totals and averages,	1,127,493	4,811	4.27	1,541,345	498,530	870	1.75	3.49
1911,	126,037	615	4.88	147,833	47,391	84	1.78	4.03
1912,	127,867	498	3.90	169,532	47,291	103	2.18	3.43
1913,	128,667	557	4.33	164,501	46,643	67	1.44	3.56
1914,	134,073	534	3.98	170,767	46,830	66	1.41	3.32
Totals and averages, .	516,584	2,204	4.27	652,633	188,061	320	1.70	3.53

*Year of the big strike, when an average of only 116 days was worked by the collieries.

Table 11.—Comparison of production and fatal accidents inside, 1910-1914, inclusive

Names of Companies	1910		1911		1912		1913		1914		Total production in tons of 2,000 pounds	Total number of fatal accidents	Number of tons produced per life lost	Fatal accidents per 1,000,000 tons produced
	Production in tons of 2,000 pounds	Number of fatal accidents	Production in tons of 2,000 pounds	Number of fatal accidents	Production in tons of 2,000 pounds	Number of fatal accidents	Production in tons of 2,000 pounds	Number of fatal accidents	Production in tons of 2,000 pounds	Number of fatal accidents				
Philadelphia and Reading Coal and Iron Co.,	11,063,293	61	12,368,179	62	12,354,472	71	12,705,331	88	11,412,037	55	59,903,312	337	177,755	5.63
Delaware, Lackawanna and Western Railroad Co.,	9,426,290	62	9,840,388	56	9,532,400	59	10,288,190	75	10,548,890	70	49,636,158	322	154,150	6.49
Lehigh Valley Coal Co.,	7,436,690	45	9,000,559	44	8,188,891	54	9,056,567	59	8,787,326	61	42,470,033	263	161,483	6.19
Delaware and Hudson Co.,	6,608,516	36	6,746,076	53	5,923,324	34	7,336,094	37	7,461,993	43	34,076,003	203	167,862	5.96
Pennsylvania Coal Co.,	5,618,507	41	6,101,405	38	5,448,795	34	6,040,021	28	6,200,145	34	29,408,873	175	168,051	5.96
Lehigh and Wilkes-Barre Coal Co.,	4,944,809	48	5,524,611	39	5,407,438	36	6,405,808	35	6,470,126	36	28,752,792	194	148,210	6.75
Lehigh Coal and Navigation Co.,	4,148,468	22	4,539,724	22	4,114,818	15	4,843,508	23	4,749,672	30	22,396,190	112	199,966	5.01
Totals and averages,	49,246,573	315	54,120,942	314	50,970,138	303	56,675,519	345	55,630,189	329	266,643,361	1,606	166,029	6.02
Susquehanna Coal Co.,	1,803,173	11	1,902,020	10	1,979,162	11	2,247,021	15	5,385,477	41	13,316,853	88	151,328	6.61
Scranton Coal Co.,	2,651,731	18	2,342,864	23	2,196,311	20	2,423,657	21	2,402,552	19	12,017,115	101	118,981	8.40
Kingston Coal Co.,	2,509,038	6	2,481,464	13	2,168,780	14	1,985,275	12	1,707,559	13	10,852,116	58	187,105	5.35
Hudson Coal Co.,	1,707,611	8	2,410,880	14	2,266,070	15	1,718,522	6	1,826,348	12	9,929,431	55	180,535	5.54
Hillside Coal and Iron Co.,	1,585,109	8	2,014,960	8	1,627,797	9	1,727,768	10	1,778,791	8	8,734,425	43	203,126	4.92
Mineral Railroad and Mining Co.,	1,791,606	12	2,019,648	18	1,991,882	10	2,238,029	13	†	....	8,041,165	53	151,720	6.59
Coxe Brothers and Co., Incorporated,	1,371,570	7	1,644,965	7	1,515,372	1	1,636,341	3	1,631,431	3	7,799,679	21	371,413	2.69
G. B. Markle Co.,	1,214,764	7	1,364,955	6	1,242,604	6	1,625,468	3	1,909,498	4	7,357,289	26	282,973	3.53
Totals and averages,	14,634,602	77	16,181,756	99	14,987,978	86	15,602,081	83	16,641,656	100	78,048,073	445	175,389	5.70
Summit Branch Mining Co.,	886,192	8	946,963	10	945,102	3	1,060,270	5	†	....	3,838,527	26	147,636	6.77
West End Coal Co.,	735,833	7	845,187	3	597,588	8	707,006	....	718,094	2	3,603,708	20	180,185	5.55
Price-Pancoast Coal Co.,	800,416	4	761,120	80	655,179	4	713,896	4	624,332	3	3,554,943	95	37,420	26.72
Pardee Brothers and Co.,	703,957	1	755,284	....	633,322	3	714,068	....	738,925	....	3,545,556	4	886,389	1.13
Jermyn and Co.,	725,134	8	741,867	7	562,318	2	568,534	....	591,243	....	3,189,096	17	187,594	5.33
A. Pardee and Co.,	578,135	4	684,698	1	584,083	2	656,989	2	670,841	1	3,174,746	10	317,475	3.15

†Now Susquehanna Coal Co.

TABLE 11.—Continued

Names of Companies	1910		1911		1912		1913		1914		Total production in tons of 2,000 pounds	Total number of fatal accidents	Number of tons produced per life lost	Fatal accidents per 1,000,000 tons produced
	Production in tons of 2,000 pounds	Number of fatal accidents	Production in tons of 2,000 pounds	Number of fatal accidents	Production in tons of 2,000 pounds	Number of fatal accidents	Production in tons of 2,000 pounds	Number of fatal accidents	Production in tons of 2,000 pounds	Number of fatal accidents				
Forty Fort Coal Co.,	*	....	724,123	4	591,242	3	620,712	10	657,905	3	2,593,982	20	129,699	7.71
Lackawanna Coal Co Limited,	549,046	3	540,175	5	368,349	3	384,842	3	388,613	2	2,231,025	16	139,439	7.17
St. Clair Coal Co.,	495,824	3	439,807	....	431,021	1	378,180	2	378,061	3	2,122,893	9	235,877	4.24
C. M. Dodson and Co.,	361,905	....	409,282	4	393,960	1	440,524	2	500,758	2	2,106,429	9	234,048	4.27
Lytle Coal Co.,	387,819	1	382,783	5	379,050	2	433,524	3	438,684	....	2,021,860	11	183,805	5.44
Totals and averages,	6,224,261	39	7,231,289	119	6,141,214	32	6,678,545	31	5,707,456	16	31,982,765	237	134,948	7.41
Plymouth Coal Co.,	387,474	1	396,600	1	361,097	3	383,254	3	305,454	3	1,833,879	14	130,991	7.63
Midvalley Coal Co.,	396,383	....	424,079	1	355,233	2	341,451	....	297,928	....	1,815,079	3	605,026	1.65
Hill Coal Co.,	336,178	....	374,777	1	311,797	2	383,329	2	390,966	7	1,797,347	12	149,779	6.67
Pittas Colliery Co.,	375,242	1	391,488	5	367,615	1	332,683	1	358,247	1	1,795,275	9	199,475	5.01
Derrick Creek Coal Co.,	79,981	....	633,043	3	514,115	4	503,583	3	‡	....	1,730,722	10	173,072	5.78
Alden Coal Co.,	325,509	2	328,573	....	298,757	....	337,666	2	369,634	2	1,660,139	6	276,690	3.61
Maryd Coal Co.,	285,080	1	274,541	2	276,898	....	351,906	....	421,338	10	1,609,763	13	123,828	8.08
Dodson Coal Co.,	289,805	1	271,333	....	248,285	3	324,037	....	475,237	2	1,609,357	6	268,226	3.73
Estate A. S. Van Wickle,	254,328	1	348,164	2	284,866	1	318,946	1	299,897	1	1,606,201	6	267,700	3.74
Oak Hill Coal Co.,	286,080	....	363,149	7	293,619	8	308,278	2	328,655	1	1,579,781	18	87,766	11.39
Mt. Lookout Coal Co.,	*	....	387,993	7	319,840	3	420,922	5	419,611	2	1,548,366	17	91,080	10.98
Greenough Red Ash Coal Co.,	177,339	3	298,081	1	273,955	1	297,447	4	311,228	1	1,458,050	10	145,805	6.86
Mt. Jessup Coal Co., Limited,	248,365	1	302,302	1	269,107	....	344,046	1	291,560	3	1,455,380	6	242,563	4.12
Excelsior Coal Co.,	299,163	1	319,511	3	295,998	2	253,998	2	262,176	2	1,430,846	10	143,085	6.99
Colonial Collieries Co.,	267,583	2	193,583	....	365,546	2	299,852	2	296,314	1	1,422,878	7	203,268	4.92
Totals and averages,	4,188,870	17	5,307,217	34	4,836,733	32	5,191,998	28	4,828,245	36	24,353,063	147	165,667	6.04

*Operated by Temple Iron Co.
‡Operated by Temple Coal Co.

Parrish Coal Co.,	486,878	9	370,087	4	521,964	9	§	....	§	....	1,378,929	22	62,679	15.95
Buck Run Coal Co.,	264,904	....	261,315	....	230,573	2	241,704	2	290,737	2	1,289,233	6	214,872	4.65
Red Ash Coal Co.,	241,834	2	244,688	2	274,202	1	254,270	1	244,241	....	1,259,235	6	209,872	4.76
Harwood Coal Co.,	230,093	....	298,404	1	246,934	....	197,561	....	234,547	1	1,207,539	2	603,769	1.66
Moosic Mountain Coal Co.,	190,555	1	229,976	1	225,278	2	281,351	2	228,440	2	1,155,600	8	144,450	6.92
Shipman Koal Co.,	245,720	3	254,913	1	192,026	1	195,026	1	266,116	4	1,153,801	10	115,380	8.67
Elliott, McClure and Co.,	285,149	4	303,159	2	277,153	3	238,434	6	**	....	1,103,895	15	73,593	13.59
Enterprise Coal Co.,	245,184	....	271,797	2	245,737	....	194,524	1	104,298	1	1,061,540	4	265,385	3.77
Harleigh Brookwood Coal Co.,	††	....	128,044	1	154,241	1	345,685	7	420,922	5	1,048,892	14	74,921	13.35
Girard Mammoth Coal Co.,	177,349	....	235,010	1	125,178	1	288,287	....	248,694	....	1,024,518	2	512,259	1.95
Temple Iron Co.,	1,016,297	11	‡‡	....	‡‡	....	‡‡	....	‡‡	....	1,016,297	11	92,390	10.82
Totals and averages,	3,383,963	30	2,597,393	15	2,493,286	20	2,186,842	20	2,037,995	15	12,699,479	100	126,995	7.87
Northern Anthracite Coal Co.,	166,499	1	199,194	3	225,654	....	190,174	1	195,946	....	977,467	5	195,493	5.12
East Boston Coal Co.,	246,558	....	185,665	2	89,536	....	208,644	3	236,270	2	966,673	7	138,096	7.24
Upper Lehigh Coal Co.,	294,791	2	172,401	....	154,679	....	192,091	....	191,860	....	915,822	2	457,911	2.18
Northwest Coal Co.,	188,888	1	221,503	1	199,246	....	210,322	1	‡	....	819,759	3	273,253	3.66
People's Coal Co.,	125,729	2	137,086	2	188,091	2	155,240	2	200,705	2	806,851	10	80,685	12.39
Raub Coal Co.,	150,948	1	162,621	....	154,391	1	144,482	3	165,647	4	778,069	9	86,452	11.57
Temple Coal Co.,	....	....	....	....	....	....	....	....	753,368	4	753,368	4	188,342	5.31
John S. Wentz and Co.,	120,148	....	136,359	1	126,963	....	159,331	1	174,860	....	717,941	2	358,971	2.79
Dolph Coal Co., Limited,	191,953	....	186,944	....	142,587	....	126,800	2	65,501	....	713,785	2	356,893	2.80
Buck Ridge Coal Mining Co.,	152,334	....	158,770	....	98,715	3	129,099	2	141,844	3	680,762	8	85,095	11.75
Hazle Mountain Coal Co.,	182,149	....	172,565	1	117,946	1	108,851	1	99,030	....	680,541	3	226,847	4.41
Mill Creek Coal Co.,	143,894	2	153,253	2	115,325	....	122,465	....	140,130	....	675,067	4	168,767	5.93
M. S. Kemmerer and Co.,	93,292	1	149,611	....	135,333	....	110,803	1	140,849	....	629,888	2	314,944	3.18
Wilkes-Barre Anthracite Coal Co.,	8,018	....	50,075	1	98,982	....	235,882	3	229,211	8	622,168	12	51,847	19.29
Trevorton Colliery Co.,	90,111	....	114,265	1	170,115	....	125,621	....	103,974	....	604,086	1	604,086	1.66
Green Ridge Coal Co.,	145,910	....	132,871	....	114,933	3	112,153	....	96,685	....	602,552	3	200,851	4.98
O'Boyle-Foy Anthracite Coal Co.,	108,403	....	142,523	1	135,561	....	94,587	....	79,680	....	560,754	1	560,754	1.78
Archbald Coal Co.,	52,998	....	106,464	1	115,440	3	114,553	2	168,745	3	558,202	9	62,022	16.12
George F. Lee Coal Co.,	102,967	1	98,779	2	100,357	....	111,905	1	138,088	1	552,087	5	110,417	9.06
W. R. McTurk Coal Co.,	115,357	....	147,293	2	132,898	....	101,098	....	34,904	....	531,750	2	265,875	3.76
Darkwater Coal Co.,	97,775	....	115,842	2	113,401	1	116,479	....	81,169	1	524,666	4	131,167	7.55
Totals and averages,	2,689,002	11	2,944,075	22	2,730,153	14	2,870,582	23	3,438,446	28	14,672,258	98	149,717	6.68
Miscellaneous Companies,	2,496,259	20	1,594,082	12	1,409,725	11	1,461,911	27	626,603	10	7,588,580	80	94,857	10.54

†Now Susquehanna Coal Co.
‡Operated by Temple Coal Co.
§Operated by Lehigh and Wilkes-Barre Coal Co.
**Operated by Pennsylvania Coal Co.
††Not operating.
‡‡Now Forty Fort Coal Co. and Mt. Lookout Coal Co.

Note. The highest average production during the five years covered by this table per life lost was 886,389 tons and the lowest, 51,847 tons. This excepts the Price-Pancoast Coal Company, a few other companies that were not in full operation and the miscellaneous companies that produced a total of only 94,857 tons.

The table enables a fair comparison to be made and, with a few exceptions such as the Delaware, Lackawanna and Western Railroad Company and a few other companies that have had unusual accidents during the five years, shows the correct standing of the companies in regard to fatalities.

It is hoped that the managers, superintendents and mine foremen will scrutinize these figures carefully and be prompted to make still greater efforts to lessen the number of fatalities in the future.

TABLE 12.—Companies that had no fatal accidents, 1910-1914, inclusive

Names of Companies	1910 Production in tons of 2,000 pounds	1911 Production in tons of 2,000 pounds	1912 Production in tons of 2,000 pounds	1913 Production in tons of 2,000 pounds	1914 Production in tons of 2,000 pounds	Total production without fatalities
Connell Anthracite Mining Co., ..	387,306	409,098	310,834	371,626	438,684	1,917,548
Mt. Hope Coal Co., ...	95,240	96,628	71,682	50,118	134,592	448,260
Economy Light, Heat and Power Co., ...	44,800	43,960	46,875	32,609	114,709	282,953
H. H. Smith and Co., ...	85,928	103,074	58,416	78,070	93,187	418,675
South Side Coal Co., ...	.....	.....	.....	70,797	65,270	136,067
Emperor Coal Co., ...	.....	.....	.....	.....	*63,353	63,353
Bulls Head Coal Co., ...	20,667	23,221	30,656	39,750	56,130	170,424
John H. Davis Coal Co., ...	40,451	38,278	33,431	35,720	43,290	191,170
Oxford Coal Co., ...	78,342	164,705	105,391	22,792	35,721	406,951
Campion and Gorman, ...	14,983	26,312	22,314	35,394	32,581	131,584
Carbondale Coal Mining Co., ...	28,483	26,893	31,553	35,473	31,829	154,231
Wolf Creek Coal Co., ...	.....	.....	34,411	47,659	27,374	109,444
Beaver Valley Coal Co., ...	15,035	.....	5,077	6,748	22,635	49,495
Bright Coal Co., ...	14,333	18,474	20,916	22,385	19,867	95,975
Clinton Falls Coal Co., ...	4,413	9,296	14,235	7,692	15,053	50,689
Butcher Creek Coal Co., ...	14,560	25,200	19,871	18,063	14,961	92,655
Carlton Coal Co., ...	.....	426	8,666	9,376	12,572	31,040
Number Six Coal Co., ...	.....	.....	4,896	7,595	7,287	19,778
Wachna—Taylor Anthracite Coal Co.	.....	.....	10,489	7,675	6,269	24,433
Elmer Neyer, ...	.....	.....	.....	.....	†5,192	5,192
Central Coal Co., ...	.....	.....	.....	.....	*5,165	5,165
Thomas R. Reese and Son, ...	4,023	5,821	6,225	3,984	4,658	24,711
John Conlon Coal Co., ...	.....	.....	.....	.....	*3,433	3,433
Plymouth Red Ash Coal Co., ...	.....	.....	.....	.....	*3,427	3,427
Black Heath Coal Co., ...	.....	.....	.....	5,507	3,414	8,921
East Mountain Coal Co., ...	.....	.....	.....	.....	*1,662	1,662

*New operation.
†Formerly operated by Moses Neyer.

TABLE 13.—Average number of days worked by breakers, total production and average production per day, 1899-1914, inclusive

Years	Average number of days worked	Production in tons of 2,000 pounds	Average production per day	Production from washeries (net tons)
1899, ...	179	60,518,331	338,119	1,055,425
1900, ...	176	57,363,396	325,928	1,818,170
1901, ...	195	67,094,665	344,075	2,009,864
1902, ...	*116	41,340,935	†356,387	2,965,792
1903, ...	211	75,232,585	356,553	4,119,258
1904, ...	213	73,594,369	345,513	3,440,420
1905, ...	208	78,647,020	378,111	3,397,688
1906, ...	206	72,139,510	350,192	4,880,402
1907, ...	227	86,056,412	379,103	5,630,169
1908, ...	211	83,543,243	395,939	4,635,923
1909, ...	205	80,223,833	391,336	5,206,562
1910, ...	212	83,683,994	394,736	5,412,167
1911, ...	234	90,917,176	388,535	4,555,457
1912, ...	220	84,426,869	383,758	4,317,161
1913, ...	242	91,626,964	378,624	2,934,157
1914, ...	229	91,189,641	398,208	2,702,537

*Strike during the year.
†Washeries worked during the strike. The time was not computed in the average days worked.

TABLE AA.—Part 1.—Number of net tons of coal mined, number of days worked, number of persons employed, number of fatal and non-fatal accidents, quantity of explosives used, etc., 1899-1914, inclusive

Districts	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production in tons of 2,000 pounds	Average number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
First,	3,989,339	451,487	47,179	4,488,005	232	8,750	37	74	3,386,925	698,867	57,005	676
Second,	3,679,596	429,078	108,520	4,217,194	246	9,333	24	70	4,332,402	576,741	68,256	753
Third,	3,256,374	237,938	82,144	3,636,456	215	7,610	29	44	3,733,400	144,358	109,431	723
Fourth,	3,966,752	146,002	152,548	4,265,302	220	8,588	22	70	4,261,680	316,554	2,337	663
Fifth,	3,467,681	286,757	55,641	3,810,079	258	6,904	16	30	3,152,575	194,296	16,500	458
Sixth,	5,761,374	514,506	67,957	6,343,837	233	13,251	45	69	5,798,150	350,560	181,609	1,156
Seventh,	5,782,179	623,360	345,884	6,751,423	227	11,584	52	88	3,866,269	535,384	414,059	1,230
Eighth,	3,832,263	472,844	112,031	4,417,138	233	8,705	37	63	2,839,400	1,114,700	94,135	1,030
Ninth,	5,163,524	483,786	166,457	5,813,767	210	10,669	36	45	3,151,725	120,792	265,398	1,128
Tenth,	5,374,620	481,922	74,426	5,930,968	242	10,739	34	60	2,945,780	375,811	696,161	673
Eleventh,	6,010,917	784,323	193,674	6,988,914	248	11,603	31	53	408,247	2,834,972	.....	923
Twelfth,	2,580,411	441,974	48,659	3,071,044	233	7,050	19	16	812,650	507,684	254,496	546
Thirteenth,	2,779,115	420,755	64,797	3,264,667	238	7,012	24	39	484,400	1,203,945	89,088	514
Fourteenth,	2,650,166	562,864	58,929	3,271,959	200	6,803	15	70	130,200	1,203,534	129,284	477
Fifteenth,	2,553,937	362,166	56,057	2,972,160	236	7,021	25	34	336,550	1,186,007	277,337	553
Sixteenth,	2,871,219	379,050	87,260	3,337,529	233	7,592	30	46	1,295,775	483,236	39,078	687
Seventeenth,	4,673,357	637,039	37,649	5,348,045	229	9,581	41	22	54,200	1,872,891	340,349	385
Eighteenth,	3,167,470	377,697	38,668	3,583,835	202	6,649	24	49	358,325	1,038,340	341,184	563
Nineteenth,	3,265,483	562,845	46,003	3,874,331	225	8,067	28	34	437,485	1,062,967	579,906	613
Twentieth,	1,842,274	469,187	46,640	2,358,101	225	5,954	12	35	197,800	495,170	236,879	533
Twenty-first,	2,045,824	326,792	72,271	3,444,887	221	7,334	19	32	2,352,175	877,365	53,855	574
Totals, 1914,	78,713,875	9,512,372	1,963,394	91,189,641	229	180,899	600	1,038	44,336,113	17,244,174	4,246,347	14,858

TABLE AA.—Part 1.—Continued

Years	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production in tons of 2,000 pounds	Average number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
									Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
1913,	80,325,964	9,357,762	1,943,238	91,626,964	242	175,310	624	1,125	44,001,660	16,093,035	3,323,645	15,109
1912,	73,462,014	8,804,759	2,160,096	84,426,869	220	175,098	601	976	41,401,015	13,685,062	2,037,026	15,187
1911,	79,775,010	9,152,073	1,930,093	90,917,176	234	173,338	699	1,124	47,946,483	13,369,056	2,122,264	15,625
1910,	73,418,729	8,396,895	1,868,369	83,683,994	212	168,175	601	1,050	45,112,322	11,171,458	1,506,140	15,847
1909,	70,314,739	8,103,810	1,805,284	80,223,833	205	171,195	567	1,034	41,191,857	10,724,616	666,827	16,122
1908,	73,507,322	8,320,032	1,715,889	83,543,243	211	174,503	678	1,170	49,380,800	10,766,245	.....	16,837
1907,	76,138,664	8,217,439	1,700,309	86,056,412	227	168,774	708	1,369	47,636,700	10,544,781	.....	17,125
1906,	63,418,916	7,198,140	1,522,454	72,139,510	206	166,175	557	1,212	40,352,075	7,980,733	.....	16,972
1905,	69,934,070	7,122,394	1,590,556	78,647,020	208	168,254	644	1,289	47,570,500	8,353,594	.....	17,500
1904,	65,137,283	6,912,358	1,544,728	73,594,369	213	161,330	599	1,047	44,779,800	6,519,312	.....	17,085
1903,	67,458,836	6,395,582	1,378,167	75,232,585	211	151,827	518	1,325	42,529,400	5,317,422	.....	16,872
1902,	35,338,031	4,955,752	1,047,152	41,340,935	116	148,139	360	641	21,128,675	2,130,965	.....	16,139
1901,	59,861,650	5,912,900	1,320,115	67,094,665	195	147,651	513	1,243	38,020,100	4,155,685	.....	16,059
1900,	50,704,201	5,466,044	1,192,551	57,363,396	176	143,824	411	1,057	30,929,500	3,454,641	.....	15,708
1899,	53,705,009	5,568,539	1,244,783	60,518,331	179	140,604	461	1,030	34,317,275	3,649,417	.....	15,690

TABLE AA.—Part 2, 1914

Districts	Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
	Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
First,	30	810	95	17,957	18,767	.....	29	17	69	297	25,436	50	72,082	24,469	21	14
Second,	6	750	110	22,790	23,540	.....	15	38	45	282	28,757	37	46,066	23,042	15	16
Third,	26	1,468	79	13,885	15,353	.....	16	.....	49	204	12,883	31	20,513	15,348	14	6
Fourth,	49	2,073	48	8,055	10,128	1	5	.....	97	190	20,709	36	27,460	16,091	11	9
Fifth,	19	760	100	15,030	15,790	.....	8	.....	70	182	13,682	44	49,620	23,200	9	5
Sixth,	.....	.....	187	30,638	30,638	.....	25	12	75	391	30,899	51	63,000	32,167	14	26
Seventh,	3	375	143	32,170	32,545	.....	28	16	19	588	55,099	39	44,515	24,970	12	24
Eighth,	.....	.....	122	29,605	29,605	.....	14	6	31	356	31,218	58	61,788	35,924	19	11
Ninth,	24	802	144	30,435	31,237	.....	18	7	43	583	49,753	44	49,114	23,187	20	23
Tenth,	6	210	98	26,648	26,858	3	34	12	82	235	31,483	33	27,497	17,597	23	21
Eleventh,	11	330	269	52,490	52,820	.....	94	12	29	386	53,562	98	113,446	59,370	13	27
Twelfth,	.....	.....	153	22,100	22,100	.....	20	15	16	333	46,194	33	61,722	18,005	3	15
Thirteenth,	.....	.....	168	23,130	23,130	.....	43	7	11	315	37,554	31	42,511	16,096	4	19
Fourteenth,	15	555	140	24,880	25,435	4	32	6	30	348	37,021	41	58,160	34,004	6	9
Fifteenth,	.....	.....	127	18,500	18,500	1	17	.....	28	236	30,158	45	47,442	22,861	13	14
Sixteenth,	20	640	144	18,982	19,622	1	25	.....	15	301	31,010	52	44,325	16,954	10	17
Seventeenth,	3	186	130	28,647	28,833	.....	54	2	77	215	39,551	38	65,990	14,031	11	13
Eighteenth,	21	790	171	23,440	24,230	2	30	9	9	236	31,372	41	59,231	25,864	8	21
Nineteenth,	.....	.....	163	34,262	34,262	1	46	1	17	393	44,796	48	47,937	15,774	14	41
Twentieth,	6	1,000	175	21,675	22,675	2	18	.....	27	282	40,851	19	33,878	9,416	10	14
Twenty-first,	26	625	112	18,290	18,915	3	25	.....	47	263	17,013	46	29,770	15,880	19	11
Totals,	265	11,374	2,878	513,609	524,983	18	596	160	886	6,616	709,001	915	1,066,067	484,250	269	357

TABLE A.—Number of each class of employes in each district, 1914

Occupations of Employes	Districts										
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh
Inside											
Mine foremen,	15	20	20	22	16	32	31	24	25	16	41
Assistant mine foremen,	27	17	24	12	19	86	91	60	33	25	88
Fire bosses and assistants,	11	79	30	54	33	40	98	65	93	92	11
Miners,	2,084	2,279	1,834	2,262	1,832	3,531	3,203	2,528	2,635	2,860	3,155
Miners' laborers,	2,625	2,669	1,989	2,441	1,942	3,642	2,534	1,781	2,682	2,885	1,940
Drivers and runners,	732	967	741	523	342	1,081	979	847	858	541	476
Doorboys and helpers,	225	155	202	165	94	158	388	122	243	157	133
Pumpmen,	34	62	37	52	39	74	79	114	77	52	108
Company men,	588	947	583	479	547	993	1,142	715	1,060	348	658
All other employes,	328	415	459	935	414	820	594	448	698	1,251	1,177
Totals,	6,669	7,610	5,919	6,945	5,278	10,457	9,139	6,704	8,404	8,227	7,787
Outside											
Superintendents,	4	3	7	5	3	6	4	7	5	4	10
Foremen,	17	16	16	20	12	18	20	16	19	15	33
Blacksmiths and carpenters,	100	108	128	98	108	238	125	221	137	189	294
Engineers and firemen,	234	287	162	144	141	314	407	285	384	321	470
Slatepickers (boys),	217	242	361	328	394	470	326	216	296	394	306
Slatepickers (men),	403	237	146	71	100	245	133	155	189	116	225
Bookkeepers and clerks,	25	28	30	42	27	27	51	44	32	48	66
All other employes,	1,081	802	841	935	841	1,576	1,379	1,057	1,203	1,425	2,412
Totals,	2,081	1,723	1,691	1,643	1,626	2,894	2,445	2,001	2,265	2,512	3,816
Grand totals inside and outside,	8,750	9,333	7,610	8,588	6,904	13,351	11,584	8,705	10,669	10,739	11,603

TABLE A.—Continued

Occupations of Employes	Districts										Grand totals inside and outside
	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth	Twenty-first	
Inside											
Mine foremen,	11	14	27	12	16	19	18	21	12	22	434
Assistant mine foremen,	122	84	100	21	17	36	53	79	33	26	1,053
Fire bosses and assistants,	.....	21	2	60	97	69	22	46	71	13	1,067
Miners,	1,449	1,329	1,115	2,221	2,369	1,976	1,822	2,088	1,400	1,925	45,897
Miners' laborers,	1,181	1,218	1,023	828	906	632	790	1,015	460	1,847	37,030
Drivers and runners,	277	204	187	356	354	274	292	336	280	474	11,121
Doorboys and helpers,	62	32	89	54	54	70	72	56	59	120	2,710
Pumpmen,	26	44	56	79	76	27	40	54	39	70	1,239
Company men,	538	368	293	368	527	2,111	535	469	463	395	14,127
All other employes,	1,376	1,352	1,260	1,055	1,090	1,445	1,028	1,328	1,626	356	19,455
Totals,	5,042	4,666	4,152	5,054	5,506	6,659	4,672	5,492	4,443	5,248	134,073
Outside											
Superintendents,	1	7	5	4	4	7	10	12	3	13	124
Foremen,	15	21	25	14	17	23	23	27	14	15	396
Blacksmiths and carpenters,	70	145	268	107	102	250	150	165	102	146	3,251
Engineers and firemen,	262	323	320	289	279	324	280	374	285	238	6,123
Slatepickers (boys),	271	300	211	419	372	280	254	369	126	355	6,507
Slatepickers (men),	83	104	80	38	65	38	49	100	14	270	2,861
Bookkeepers and clerks,	35	49	36	42	52	50	35	51	29	39	838
All other employes,	1,271	1,397	1,706	1,054	1,195	1,950	1,176	1,477	938	1,010	26,726
Totals,	2,008	2,346	2,651	1,967	2,086	2,922	1,977	2,575	1,511	2,086	46,826
Grand totals inside and outside,	7,050	7,012	6,803	7,021	7,592	9,581	6,649	8,067	5,954	7,334	180,899

TABLE B.—Causes of fatal accidents inside and outside the mines, and number attributable to each cause; number of wives made widows and children made orphans by reason of such accidents, 1914

Causes of Fatal Accidents	Districts																	
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth
Inside																		
Falls of coal, slate and roof,	21	13	6	9	10	21	21	18	15	20	13	4	3	4	8	11	6	7
Mine cars,	7	4	2	1	2	5	7	5	4	4	6	5	1	1	5	.....	6	2
Explosions of gas,	.....	.....	.....	.....	.....	2	9	.....	5	2	.....	2	2	1	4	2	9	2
Suffocation by gas, etc.,	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	1	5	1
Explosions of powder and dynamite,	2	1	1	2	1	.....	1	.....	1	.....	.....	1	.....	.....	.....	1	.....	2
Blasts, premature and otherwise,	3	6	4	6	2	9	7	10	4	5	.....	2	3	1	2	4	.....	3
Falling into shafts, slopes, etc.,	.....	.....	15	.....	.....	1	2	2	1	1	1	2	2	.....	3	6	1	6
Crushed at batteries,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1
Kicked by mules, etc.,	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machinery,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Electricity,	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Miscellaneous,	1	.....	.....	.....	.....	3	3	.....	3	.....	1	1	2	2	3	4	1	.....
Totals,	35	24	28	18	15	42	51	35	34	32	21	17	14	9	25	29	31	24
Outside																		
Cars,	.....	.....	1	1	.....	1	1	1	.....	1	6	.....	7	3	.....	.....	5	.....
Machinery,	.....	.....	.....	.....	.....	2	.....	1	2	.....	3	1	1	.....	.....	1	1	.....
Suffocation in chutes, etc.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boiler explosions,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Electricity,	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous,	2	.....	.....	2	1	.....	.....	.....	.....	1	1	1	2	3	.....	.....	4	.....
Totals,	2	.....	1	4	1	3	1	2	2	2	10	2	10	6	.....	1	10	.....
Grand totals inside and outside,	37	24	29	22	16	45	52	37	36	34	31	19	24	15	25	30	41	24

Widows, 337.
Orphans, 804.

TABLE B.—Continued

Causes of Fatal Accidents	Districts				Percentages for 1914	Percentages for 1913	Percentages for 1912	Percentages for 1911	Percentages for 1910	Percentages for 1909	Percentages for 1908	Percentages for 1907	Percentages for 1906	Percentages for 1905	Percentages for 1904
	Nineteenth	Twentieth	Twenty-first	Totals											
Inside															
Falls of coal, slate and roof,	9	3	9	231	43.26	46.86	49.40	41.14	49.71	51.84	47.65	46.42	46.93	53.44	47.98
Mine cars,	4	2	3	76	14.23	15.44	15.66	14.96	18.07	14.49	15.10	14.64	14.69	14.88	14.31
Explosions of gas,	1	2	.....	43	8.05	8.62	7.03	5.53	3.93	5.71	9.56	7.32	9.43	5.99	6.05
Suffocation by gas, etc.,	1	1	.....	12	2.25	2.69	1.01	13.98	2.75	3.47	.67	3.33	1.53	1.81	4.03
Explosions of powder and dynamite,	.....	.....	.....	13	2.44	1.97	5.02	3.42	4.32	4.49	3.86	2.83	6.14	2.91	7.06
Blasts, premature and otherwise,	2	.....	3	76	14.23	11.13	10.24	10.89	11.79	9.59	11.58	11.65	11.62	7.99	6.86
Falling into shafts, slopes, etc.,	4	.....	.....	47	8.80	5.39	3.61	3.42	3.73	3.67	3.69	4.16	4.39	7.80	5.24
Crushed at batteries,	.....	.....	.....	3	.56	.54	.80	.91	.59	.82	.34	.33	.44	.55	.61
Kicked by mules, etc.,	.....	.....	1	2	.37	.54	.40	.49	.20	1.23	.67	1.33	.66	.36	1.21
Machinery,	1	.....	.....	1	.19	.36	.....	.65	.39	.....	.17	.33	.44	.....	.....
Electricity,	1	.....	.....	3	.56	.18	1.01	.32	.59	1.22	.17	.50	.....	.....	.....
Miscellaneous,	1	2	.....	27	5.06	6.28	5.82	4.39	3.93	3.47	6.54	7.16	3.73	4.17	6.65
Totals,	24	10	16	534	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Outside															
Cars,	2	1	3	33	50.00	55.23	39.81	30.95	43.48	33.77	42.68	44.86	35.65	24.73	43.44
Machinery,	.....	.....	.....	12	18.18	17.91	19.42	26.19	27.17	25.97	35.37	27.10	22.77	25.48	15.15
Suffocation in chutes, etc.,	.....	.....	.....	.....	.....	2.98	11.65	9.53	2.18	12.99	1.22	2.80	8.91	11.83	8.08
Boiler explosions,	.....	.....	.....	.....	.....	.....	.....	1.19	.....	.....	1.22	.94	.99	1.08	2.02
Electricity,	.....	.....	.....	1	1.52	1.49	1.94	1.19	.....	.....	1.22	1.87	.....	.....	.....
Miscellaneous,	2	1	.....	20	30.30	22.39	27.18	30.95	27.17	27.27	18.29	22.43	31.68	26.88	31.31
Totals,	4	2	3	66	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Grand totals inside and outside,	28	12	19	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Note. This table gives a detailed statement of fatalities for the year 1914 with the percentages for the years 1904 to 1914 inclusive.

A comparison of the fatalities for the 11 years shows that the percentage is about the same as for the year 1914. The percentage per year from falls was 47.69; from cars, 15.13; from explosions of gas, 7.02; from suffocation from fumes from explosions, 3.41; from explosives, 4.04; from blasts, 10.69; falling into shafts, slopes, et cetera, 4.90; a total of 92.88 per cent. of all the inside accidents.

On the surface 50 per cent. of the fatalities were due to cars and 18.18 per cent. to machinery.

TABLE C.—Causes of non-fatal accidents inside and outside the mines, and number attributable to each cause, 1914

Causes of Non-Fatal Accidents	Districts																					Totals	Percentages
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth	Twenty-first		
Inside																							
Falls of coal, slate and roof,	27	27	13	20	17	25	23	13	11	17	24	5	5	13	12	17	4	11	6	8	16	314	34.50
Mine cars,	9	25	13	16	6	15	18	17	8	17	15	2	5	6	7	2	6	4	5	6	8	210	23.07
Explosions of gas,	....	2	....	1	....	4	10	4	7	1	4	3	8	16	3	4	3	10	9	4	....	93	10.22
Explosions of powder and dynamite,	6	....	5	3	....	3	2	....	....	1	1	....	....	2	....	....	....	1	1	....	1	26	2.85
Blasts, premature and otherwise,	3	8	8	15	....	11	15	15	5	6	....	5	6	1	1	6	2	5	4	3	3	122	13.43
Falling into shafts, slopes, etc.,	1	....	....	....	....	....	2	....	....	2	2	....	2	....	....	....	....	2	....	1	....	12	1.32
Crushed at batteries,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	.11
Kicked by mules, etc.,	5	....	1	1	....	1	1	1	1	1	1	....	1	1	1	1	....	2	....	3	....	22	2.41
Machinery,	....	1	....	3	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	5	.55
Electricity,	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	.11
Miscellaneous,	9	2	....	9	3	3	6	6	6	9	2	1	4	14	2	12	3	3	4	3	3	104	11.43
Totals,	60	65	40	69	26	62	77	57	38	54	49	16	31	53	27	42	18	38	29	28	31	910	100.00
Outside																							
Cars,	6	2	....	....	....	1	2	2	3	1	2	....	1	3	4	....	1	7	2	4	....	41	32.03
Machinery,	1	....	2	1	....	1	....	....	....	2	....	....	3	4	....	2	....	1	2	1	....	20	15.63
Boiler explosions,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	.....
Electricity,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	.....
Miscellaneous,	7	3	2	....	4	5	4	4	4	3	2	....	4	10	3	2	3	3	1	2	1	67	52.34
Totals,	14	5	4	1	4	7	6	6	7	6	4	....	8	17	7	4	4	11	5	7	1	128	100.00
Grand totals inside and outside,	74	70	44	70	30	69	83	63	45	60	53	16	39	70	34	46	22	49	34	35	32	1,038	.....

TABLE D.—Number of gaseous and non-gaseous mines in operation, number of foremen, assistants and fire bosses; production and percentage of production in net tons from gaseous and non-gaseous mines and washeries, by districts, 1914

Districts	Gaseous Mines				Non-Gaseous Mines			Production in tons of 2,000 pounds from gaseous mines	Production in tons of 2,000 pounds from non-gaseous mines	Production in tons of 2,000 pounds from washeries	Percentage of production from gaseous mines	Percentage of production from non-gaseous mines	Percentage of production from washeries
	Number of gaseous mines in operation	Number of mine foremen	Number of mine foremen assistant	Number of fire bosses	Number of non-gaseous mines in operation	Number of mine foremen	Number of mine foremen assistant						
First,	4	2	4	11	24	13	23	1,064,329	3,391,452	32,224	23.71	75.56	.73
Second,	21	16	16	79	4	4	1	3,831,065	122,886	263,243	90.85	2.91	6.24
Third,	10	10	9	30	14	10	15	2,375,898	1,137,482	123,076	65.33	31.28	3.39
Fourth,	22	16	10	54	13	6	2	3,405,769	565,572	293,961	79.84	13.26	6.90
Fifth,	14	7	7	33	16	9	12	2,153,254	1,475,162	181,663	56.51	38.72	4.77
Sixth,	23	22	70	40	18	10	16	4,561,661	1,782,176	.....	71.91	28.09	.....
Seventh,	44	29	83	98	5	2	8	6,037,340	431,243	282,840	89.42	6.39	4.19
Eighth,	17	16	43	65	10	8	17	3,672,435	711,345	33,358	83.14	16.10	.76
Ninth,	37	19	27	93	9	6	6	5,053,341	480,015	280,411	86.92	8.26	4.82
Tenth,	35	13	22	92	14	3	3	5,027,769	706,106	197,093	84.77	11.91	3.32
Eleventh,	31	26	56	11	49	15	32	3,498,077	3,402,930	87,907	50.05	48.69	1.26
Twelfth,	16	11	122	.....	.....	.....	.....	3,008,910	.....	62,134	97.97	.....	2.03
Thirteenth,	22	11	76	21	10	3	8	2,248,978	886,780	128,909	68.89	27.16	3.95
Fourteenth,	27	23	92	2	10	4	8	2,854,116	417,843	.....	87.23	12.77	.....
Fifteenth,	14	7	8	60	16	5	12	1,457,319	1,514,841	.....	49.03	50.97	.....
Sixteenth,	25	11	14	97	16	5	3	2,311,199	976,146	50,184	69.25	29.25	1.50
Seventeenth,	17	14	31	69	19	5	5	3,986,960	1,079,619	281,466	74.55	20.19	5.26
Eighteenth,	21	13	30	22	24	5	23	2,332,839	1,250,996	.....	65.09	34.91	.....
Nineteenth,	33	13	54	46	17	8	25	2,671,164	1,112,440	90,727	68.95	28.71	2.34
Twentieth,	23	11	32	71	1	1	1	2,121,523	19,506	217,072	89.97	.82	9.21
Twenty-first,	4	3	4	13	34	19	22	485,796	2,862,822	96,269	14.10	83.10	2.80
Totals and percentages,	460	293	810	1,007	323	141	242	64,159,747	24,327,362	2,702,537	70.36	26.68	2.96

TABLE E.—Quantity of coal produced by each company that produced 300,000 or more tons, and the number of persons employed, 1914

Names of Companies	Inspection Districts	Number of employes inside	Number of employes outside	Total number of employes	Production of coal in net tons
Philadelphia and Reading Coal and Iron Company,	Twelfth, Thirteenth, Fourteenth, Fifteenth, Sixteenth, Eighteenth, Nineteenth, Twentieth,	19,043	7,250	26,293	11,412,037
Delaware, Lackawanna and Western Railroad Company,	Second, Third, Fourth, Fifth, Seventh, Eighth, Ninth, Tenth,	16,856	3,419	20,275	10,548,890
Lehigh Valley Coal Company,	Fifth, Sixth, Seventh, Eighth, Eleventh, Twelfth, Fourteenth, Eighteenth, Twentieth,	11,468	4,108	15,576	8,787,326
	First, Second, Sixth, Seventh, Ninth,	11,488	3,244	14,732	7,461,993
Delaware and Hudson Company,	Seventh, Ninth, Tenth, Eighteenth,	8,761	2,184	10,945	6,470,126
Lehigh and Wilkes-Barre Coal Company,	Third, Fifth, Sixth,	9,576	3,067	12,643	6,309,145
Pennsylvania Coal Company,	Tenth, Thirteenth, Fifteenth, Sixteenth, Twentieth,	8,703	3,753	12,456	5,385,477
Susquehanna Coal Company,	Seventeenth,	5,842	2,480	8,322	4,749,672
Lehigh Coal and Navigation Company,	First, Second, Third, Fourth, Twenty-first,	3,883	1,373	5,256	2,402,552
Scranton Coal Company,	Eleventh,	1,787	752	2,539	1,909,498
G. B. Markle Company,	Third, Fourth, Fifth, Sixth, Twenty-first,	2,923	821	3,744	1,826,348
Hudson Coal Company,	First, Fifth, Sixth, Twenty-first,	3,108	954	4,062	1,778,791
Hillside Coal and Iron Company,	Eighth, Ninth,	2,410	740	3,150	1,707,559
Kingston Coal Company,	Eleventh, Seventeenth, Eighteenth,	1,783	768	2,551	1,631,431
Coxe Brothers and Company, Incorporated,	First, Twenty-first,	983	266	1,249	753,368
Temple Coal Company,	Eleventh,	735	377	1,112	738,925
Pardee Brothers and Company, Incorporated,	Tenth,	946	270	1,216	718,094
West End Coal Company,	Eleventh,	1,082	487	1,569	670,841
A. Pardee and Company,	Eighth,	1,128	322	1,450	657,905
Forty Fort Coal Company,	Third,	1,165	235	1,400	624,232
Price-Pancoast Coal Company,	Fifth,	768	189	957	591,243
Jermyn and Company,	Eleventh,	492	257	749	500,758
C. M. Dodson and Company,	Eighteenth,	514	288	802	475,237
Dodson Coal Company,	Nineteenth,	618	246	864	438,684
Lytle Coal Company,	Eighteenth,	373	177	550	421,338
Maryd Coal Company,	Eleventh, Thirteenth, Fourteenth,	575	320	895	420,922
Harleigh Brookwood Coal Company,	Eighth,	683	156	839	419,611
Mt. Lookout Coal Company,					

TABLE E.—Continued

Names of Companies	Inspection Districts	Number of employes inside	Number of employes outside	Total number of employes	Production of coal in net tons
Pine Hill Coal Company,	Nineteenth,	513	194	707	390,966
Lackawanna Coal Company, Limited,	Twenty-first,	569	162	731	388,613
St. Clair Coal Company,	Nineteenth,	400	388	788	378,061
Alden Coal Company,	Tenth,	599	181	780	369,634
Connell Anthracite Mining Company,	Twenty-first,	341	160	501	361,336
Thomas Colliery Company,	Thirteenth,	280	210	490	358,247
Oak Hill Coal Company,	Nineteenth,	504	234	738	328,655
Greenough Red Ash Coal Company,	Fifteenth,	378	231	609	311,228
Plymouth Coal Company,	Eighth, Ninth,	659	255	914	305,454
Totals,		121,936	40,518	162,454	82,895,797

The 36 companies named in this table, out of 115 companies in the region, produced 82,895,797 tons or 90.90 per cent. of the total output, 91,189,641 tons.

TABLE F.—Classification of employes killed or fatally injured inside and outside the mines, 1899-1914, inclusive

Employes Killed or Fatally Injured	Years																
	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	Totals
Inside																	
Mine foremen and assistants,	2	.....	5	2	3	3	1	2	2	3	1	2	2	1	3	2	34
Fire bosses and assistants,	2	5	2	3	2	1	2	6	2	3	2	2	5	1	8	4	50
Miners,	199	184	224	114	202	233	308	226	309	313	264	254	306	262	286	296	3,980
Miners' laborers,	114	95	122	62	110	145	148	133	136	154	126	147	176	117	148	126	2,059
Drivers and runners,	39	33	45	27	46	31	31	32	46	49	37	40	45	42	33	28	604
Doorboys, etc.,	18	8	6	5	12	20	14	9	18	18	11	6	15	8	7	8	183
All other employes,	15	33	37	32	51	63	47	48	88	56	49	58	66	67	72	70	852
Totals,	389	358	441	245	426	496	551	456	601	596	490	509	615	498	557	534	7,762
Outside																	
Foremen,	1	.....	.....	.....	1	1	.....	2	.....	2	1	.....	4	1	3	1	17
Blacksmiths and carpenters,	2	2	.....	2	4	5	5	5	1	5	4	6	7	3	1	5	57
Engineers and firemen,	6	2	5	7	6	3	6	3	8	4	7	4	2	7	1	5	76
Slatepickers,	10	9	9	12	9	11	24	14	16	14	7	8	8	5	3	2	161
All other employes,	53	40	58	34	72	79	58	77	82	57	58	74	63	87	59	53	1,004
Totals,	72	53	72	55	92	99	93	101	107	82	77	92	84	103	67	66	1,315
Grand totals inside and outside,	461	411	513	300	518	595	644	557	708	678	567	601	699	601	624	600	9,077

TABLE G.—Number and causes of fatal accidents in and about the mines, by decades, 1870-1914, inclusive

Causes of Fatal Accidents	1870-1879	Percentages	1880-1889	Percentages	1890-1899	Percentages	1900-1909	Percentages	1910-1914	Percentages	Grand totals	Percentages for 45 years
Inside												
Falls of coal, slate and roof,	927	46.44	1,351	50.37	1,928	51.87	2,291	49.16	1,244	45.85	7,741	49.09
Mine cars,	263	13.18	470	17.52	535	14.39	710	15.23	424	15.63	2,402	15.24
Explosions of gas,	243	12.17	250	9.32	399	10.74	352	7.55	180	6.63	1,424	9.03
Suffocation by gas, etc.,	53	2.66	10	.37	114	3.07	103	2.21	132	4.87	412	2.61
Explosions of powder and dynamite,	76	3.81	82	3.06	117	3.15	206	4.42	92	3.39	573	3.63
Blasts, premature and otherwise,	124	6.21	182	6.79	280	7.53	435	9.34	316	11.65	1,337	8.48
Falling into shafts, slopes, etc.,	100	5.01	117	4.36	178	4.79	241	5.17	135	4.98	771	4.89
Crushed at batteries,	12	.60	5	.19	12	.32	17	.37	18	.66	64	.41
Mules,	16	.80	8	.30	44	1.18	37	.79	11	.40	116	.74
Electricity,	.....	.....	.....	.....	.....	.....	10	.22	14	.52	24	.15
Miscellaneous causes,	182	9.12	207	7.72	110	2.96	258	5.54	147	5.42	904	5.73
Totals and percentages,	1,996	100.00	2,682	100.00	3,717	100.00	4,660	100.00	2,713	100.00	15,768	100.00
Outside												
Cars,	76	30.16	167	39.11	199	31.74	316	38.03	177	42.96	935	36.68
Machinery,	66	26.19	110	25.76	127	20.26	212	25.51	92	22.33	607	23.81
Suffocation in chutes, etc.,	14	5.56	3	.70	33	5.26	54	6.50	23	5.58	127	4.98
Boiler explosions,	21	8.33	29	6.79	36	5.74	9	1.08	1	.24	96	3.77
Electricity,	.....	.....	.....	.....	.....	.....	3	.36	5	1.22	8	.32
Miscellaneous causes,	75	29.70	118	27.64	232	37.00	237	28.52	114	27.67	776	30.44
Totals and percentages,	252	100.00	427	100.00	627	100.00	831	100.00	412	100.00	2,549	100.00
Grand totals inside and outside,	2,248	.....	3,109	.....	4,344	.....	5,491	.....	3,125	.....	18,317	.....

NOTE—This compilation of fatalities for forty-five years shows that 92.97 per cent. of the accidents inside the mines were caused by falls, cars, gas and suffocation, blasts and falling into shafts and slopes.

TABLE H.—Nationality of employes killed or fatally injured inside and outside the mines, 1892-1914, inclusive

Nationality	1892-1895	1896-1900	1901-1905	1906-1910	1911-1914
American,	310	404	617	618	481
English,	124	132	94	78	57
Welsh,	154	176	122	122	68
Scotch,	8	21	12	9	5
Irish,	287	332	212	159	92
German,	93	97	97	80	46
Totals,	976	1,162	1,154	1,066	749
Polish,	420	609	669	926	678
Hungarian,	195	186	103	89	31
Italian,	67	68	142	246	213
Slavonian,	30	42	151	200	223
Lithuanian,	17	36	152	321	321
Austrian,	20	39	84	77	89
Russian,	7	39	88	150	153
Greek,	5	15	9	13	30
Swedish,	3	10	4	5	6
French,	1	2	2	.....	2
Tyrolean,	.....	3	9	13	7
Bohemian,	.....	1	.....	3	3
Assyrian,	.....	.....	1	.....	1
Canadian,	.....	.....	2	.....	.....
Montenegrin,	.....	.....	.....	2	2
Horwat,	.....	.....	.....	.....	7
Magyar,	.....	.....	.....	.....	7
Hebrew,	.....	.....	.....	.....	.....
Syrian,	.....	.....	.....	.....	1
Croatian,	.....	.....	.....	.....	1
Totals,	765	1,050	1,416	2,045	1,775
Grand totals,	1,741	2,212	2,570	3,111	2,524

TABLE I.—Production of coal; production per employe inside; quantity of explosives used and production per each pound of explosives used, 1892-1914, inclusive

Years	Production in tons of 2,000 pounds	Average number of tons of coal produced per employe inside	Explosives			Average number of tons of coal produced for each pound of explosive used
			Number of pounds of black powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
1892,	51,226,977	624	30,981,875	1,092,190	.....	1.59
1893,	52,841,110	611	31,723,771	1,324,142	.....	1.60
1894,	50,966,920	580	30,755,450	1,713,235	.....	1.57
1895,	56,948,756	638	32,766,775	1,797,494	.....	1.65
1896,	53,842,249	568	32,117,950	1,733,970	.....	1.59
1897,	52,581,036	549	31,804,950	2,415,650	.....	1.54
1898,	52,802,594	579	30,670,100	3,025,015	.....	1.57
1899,	60,518,331	657	34,317,275	3,649,417	.....	1.59
1900,	57,363,396	609	30,929,700	3,454,641	.....	*1.67
1901,	67,094,665	682	38,020,100	4,155,685	.....	1.59
1902,	41,340,935	*482	21,128,675	2,130,965	.....	†1.77
1903,	75,232,585	‡737	42,529,400	5,317,422	.....	1.57
1904,	73,594,369	662	44,779,800	6,519,312	.....	1.43
1905,	78,647,020	667	47,570,500	8,353,594	.....	1.41
1906,	72,139,510	627	40,352,075	7,980,733	.....	1.41
1907,	86,056,412	730	47,636,700	10,544,781	.....	1.48
1908,	83,543,243	672	49,380,800	10,766,245	.....	1.39
1909,	80,223,833	651	41,191,857	10,724,616	666,827	1.53
1910,	83,653,994	689	45,112,322	11,171,458	1,506,140	1.45
1911,	90,917,176	721	47,846,483	13,369,056	2,122,264	1.44
1912,	84,426,869	661	41,401,015	13,685,062	2,037,026	1.48
1913,	91,626,964	712	44,001,660	16,093,035	3,323,645	1.44
1914,	91,189,641	680	44,336,113	17,244,174	4,246,347	1.39

The ton of 2,000 pounds is used so that a comparison can be made with the bituminous production per pound of powder used.

*This decrease in production per employe inside was caused by the small number of days worked on account of the strike.

†The increase in production per pound of powder used was caused by the production of the washeries during the strike.

‡The increase in production per employe was due to the large production of the washeries.

TABLE J.—Number of employes inside and outside the mines by counties, 1899-1914, inclusive

Counties	1899	1900	1901	1902	1903	1904	1905	1906
Carbon,	3,993	4,242	4,365	3,805	4,051	4,467	4,240	4,469
Columbia,	2,302	2,033	2,329	2,339	2,236	2,192	2,368	2,246
Dauphin,	2,390	2,577	2,353	1,945	2,140	2,113	2,167	2,233
Lackawanna,	30,886	32,811	34,798	35,333	37,470	40,675	40,859	41,429
Luzerne,	50,803	52,015	53,280	52,766	55,639	59,136	60,734	54,441
Northumberland,	14,697	15,105	14,187	14,863	14,580	14,345	15,208	14,730
Schuylkill,	33,392	33,259	33,907	34,950	33,443	35,979	40,465	40,289
Sullivan,	465	521	434	752	648	665	536	634
Susquehanna,	1,210	1,250	1,409	1,386	1,363	1,392	1,307	1,320
Wayne,	406	11	589	.....	253	366	370	384
Totals,	140,604	143,824	147,651	148,139	151,827	161,330	168,254	166,175

Counties	1907	1908	1909	1910	1911	1912	1913	1914
Carbon,	4,782	5,522	5,155	5,362	5,223	5,778	5,689	8,021
Columbia,	2,295	2,412	2,393	1,812	2,066	2,166	2,119	2,060
Dauphin,	2,124	2,294	2,215	2,229	2,280	2,347	2,450	2,469
Lackawanna,	42,742	42,418	44,213	43,214	43,991	43,927	43,925	44,124
Luzerne,	58,975	63,099	60,500	59,395	62,880	63,128	63,898	68,202
Northumberland,	15,709	15,581	14,878	15,133	15,148	15,392	15,075	15,320
Schuylkill,	39,870	40,775	39,457	38,653	39,285	39,822	39,670	38,004
Sullivan,	719	875	963	920	992	996	1,024	1,063
Susquehanna,	1,275	1,302	1,227	1,267	1,313	1,391	1,420	1,539
Wayne,	463	225	194	190	160	151	40	97
Totals,	168,774	174,503	171,195	168,175	173,338	175,098	175,310	180,899

TABLE K.—Production of coal in tons of 2,000 pounds by counties 1899-1914, inclusive

Counties	1899	1900	1901	1902	1903	1904	1905	1906
Carbon,	1,826,267	1,863,637	1,858,519	1,104,462	2,150,021	2,253,512	2,476,406	2,246,823
Columbia,	1,002,469	980,721	1,209,859	738,070	1,353,904	1,151,624	1,229,697	969,065
Dauphin,	817,328	779,135	830,572	423,341	732,970	723,414	723,126	734,723
Lackawanna,	11,838,821	13,755,961	17,258,125	11,851,169	20,046,133	19,007,628	19,709,164	18,840,561
Luzerne,	22,287,712	21,481,122	23,963,869	14,577,949	27,878,362	27,705,288	29,992,636	26,612,192
Northumberland	4,860,292	4,690,944	5,430,991	3,162,066	5,518,580	5,516,647	5,483,181	5,367,497
Schuylkill,	13,694,171	12,998,899	15,277,658	8,622,103	16,389,505	16,173,158	17,975,160	16,376,538
Sullivan,	183,182	235,112	152,505	409,017	293,442	294,305	310,496	358,627
Susquehanna,	699,020	556,003	743,105	452,758	800,773	692,440	680,146	562,103
Wayne,	309,069	21,862	369,462	.....	68,895	71,353	67,008	71,381
Totals,	60,518,331	57,363,396	67,094,665	41,340,935	75,232,585	73,594,369	78,647,020	72,139,510

Counties	1907	1908	1909	1910	1911	1912	1913	1914
Carbon,	2,762,523	2,784,946	2,652,997	3,214,169	3,312,483	2,843,876	3,353,277	3,186,691
Columbia,	1,188,268	1,182,326	1,093,103	960,145	1,193,736	1,214,527	1,214,648	1,066,471
Dauphin,	829,980	848,005	932,393	886,192	946,963	945,102	1,060,270	1,000,988
Lackawanna,	22,433,409	21,631,995	20,489,212	21,182,921	22,598,414	20,617,308	21,836,671	21,649,788
Luzerne,	30,853,087	31,728,997	30,992,306	32,106,979	35,061,582	32,643,232	36,326,287	36,973,767
Northumberland	6,665,392	6,067,741	5,987,835	6,324,317	7,109,372	6,851,491	7,012,687	6,710,131
Schuylkill,	20,160,970	18,196,714	16,794,597	17,696,013	19,234,447	17,986,745	19,511,483	19,166,424
Sullivan,	433,101	550,712	641,216	622,874	717,429	649,235	664,063	643,730
Susquehanna,	644,088	487,900	589,835	628,808	672,600	582,510	594,764	658,249
Wayne,	85,594	63,906	50,339	51,576	70,150	92,843	52,814	133,402
Totals,	86,056,412	83,543,243	80,223,333	83,683,994	90,917,176	84,426,869	91,626,964	91,189,641

TABLE L.—Fatal accidents per 1,000 employes inside and outside the mines, and production in tons per fatal accident, by years and by decades, 1870-1914, inclusive

Years	Employes	Fatal accidents	Fatal accidents per 1,000 employes	Production in tons of 2,000 pounds	Production per fatal accident	Fatal accidents per 1,000,000 tons produced
1870,	35,600	211	5.93	14,172,004	67,166	14.89
1871,	37,488	210	5.60	15,532,252	73,963	13.52
1872,	44,745	223	4.98	15,567,973	69,811	14.32
1873,	48,199	264	5.48	21,001,521	79,551	12.57
1874,	53,402	231	4.33	19,930,240	86,278	11.59
1875,	69,966	238	3.40	23,402,646	98,330	10.17
1876,	70,474	228	3.24	23,440,666	102,810	9.73
1877,	66,842	194	2.90	24,727,213	127,460	7.85
1878,	63,964	187	2.92	20,900,966	111,770	8.95
1879,	68,847	262	3.81	31,036,600	118,460	8.44
Totals and percentages,	559,527	2,248	4.02	209,712,081	93,288	10.72
1880,	73,373	202	2.75	27,974,532	138,488	7.22
1881,	76,031	274	3.59	34,202,558	125,284	7.98
1882,	82,200	291	3.54	35,057,430	120,472	8.30
1883,	91,421	323	3.53	37,747,369	116,865	8.56
1884,	101,073	332	3.28	36,468,738	109,846	9.10
1885,	100,320	332	3.31	38,232,155	115,157	8.68
1886,	103,044	279	2.71	38,950,932	139,609	7.16
1887,	106,517	316	2.97	42,156,300	133,406	7.50
1888,	122,218	364	2.98	46,635,037	128,118	7.81
1889,	119,646	397	3.32	43,650,768	109,952	9.09
Totals and percentages,	975,843	3,109	3.10	381,075,819	122,572	8.16
1890,	119,919	378	3.15	44,986,286	119,011	8.40
1891,	123,308	428	3.47	49,701,322	116,125	8.61
1892,	130,300	418	3.21	51,226,978	122,553	8.16
1893,	138,069	456	3.30	52,841,110	115,880	8.63
1894,	139,939	446	3.19	50,966,920	114,276	8.75
1895,	143,705	421	2.93	56,948,756	135,270	7.39
1896,	150,088	502	3.34	53,843,250	107,257	9.32
1897,	149,557	423	2.83	52,581,036	124,305	8.04
1898,	142,420	411	2.89	52,812,675	128,498	7.78
1899,	140,604	461	3.28	60,518,331	131,276	7.62
Totals and percentages,	1,377,909	4,344	3.15	526,426,664	121,185	8.25
1900,	143,824	411	2.86	57,363,396	139,570	7.16
1901,	147,651	513	3.47	67,094,665	130,789	7.65
1902,	148,139	300	2.03	41,340,935	137,803	7.26
1903,	151,827	518	3.41	75,232,585	145,237	6.89
1904,	161,330	595	3.69	73,594,369	123,688	8.08
1905,	168,254	644	3.83	78,647,020	122,123	8.19
1906,	166,175	557	3.35	72,139,510	129,514	7.72
1907,	168,774	708	4.20	86,056,412	121,549	8.23
1908,	174,503	678	3.88	83,543,243	123,220	8.12
1909,	171,195	567	3.31	80,223,833	141,488	7.07
Totals and percentages,	1,601,672	5,491	3.42	715,235,946	130,256	7.68
1910,	168,175	601	3.57	83,683,994	139,241	7.18
1911,	173,338	699	4.03	90,917,176	130,067	7.69
1912,	175,098	601	3.43	84,426,849	140,477	7.12
1913,	175,310	624	3.56	91,626,964	146,838	6.81
1914,	180,899	600	3.32	91,189,641	151,982	6.58
	872,820	3,125	3.58	441,844,644	141,390	7.07
Grand totals and percentages,	5,388,089	18,317	3.40	2,274,295,154	124,163	8.05

Note. The Anthracite Mine Law became effective in 1870, and the average number of fatalities for the first decade, 1870-1879 inclusive, was 4.02 per 1,000 employes and 10.72 for every 1,000,000 tons produced.

The average number of fatalities for the second decade, 1880-1889 inclusive, was 3.10 per 1,000 employes and 8.16 for every 1,000,000 tons produced.

The average number of fatalities for the third decade, 1890-1899 inclusive, was 3.15 per 1,000 employes and 8.25 for every 1,000,000 tons produced.

The average number of fatalities for the fourth decade, 1900-1909 inclusive, was 3.42 per 1,000 employes and 7.68 for every 1,000,000 tons produced.

The average number of fatalities for the five years, 1910-1914 inclusive, was 3.58 per 1,000 employes and 7.07 for every 1,000,000 tons produced.

The record for 1914 of 3.32 lives lost for every 1,000 employes and 6.58 for every 1,000,000 tons produced is a good record under the circumstances and is gratifying to the Department.

ANTHRACITE DISTRICTS

FIRST DISTRICT

LACKAWANNA COUNTY

Carbondale, Pa., February 27, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the First Anthracite District for the year ending December 31, 1914.

Respectfully submitted,

P. J. MOORE, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	13
Number of mines,	28
Number of mines in operation,	28
Number of tons of coal shipped to market,	3,561,910
Number of tons used at mines for steam and heat,	403,113
Number of tons sold to local trade and used by employes,	42,124
Number of tons produced,	4,007,147
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	6,669
Number of persons employed outside,	2,081
Number of fatal accidents inside of mines,	35
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	60
Number of non-fatal accidents outside,	14
Number of tons of coal produced per fatal accident inside,	114,490
Number of tons produced per fatal accident outside,	2,003,574
Number of tons produced per fatal accident inside and outside,	108,301
Number of persons employed per fatal accident inside,	191
Number of persons employed per fatal accident outside,	1,041
Number of persons employed per fatal accident inside and outside,	236
Number of persons employed per non-fatal accident inside,	108
Number of persons employed per non-fatal accident outside,	149
Number of persons employed per non-fatal accident inside and outside,	118
Number of wives made widows,	25
Number of children made orphans,	60
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	29
Number of compressed air locomotives used inside,	17
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	69
Number of electric motors used outside,	.....
Number of gasoline locomotives used inside,	.....
Number of fans in use,	30
Number of furnaces in use,	.....
Number of gaseous mines in operation,	4
Number of non-gaseous mines in operation,	24
Number of new mines opened,	.....
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware and Hudson Company,	2,729,329
Temple Coal Company,	514,879
Scranton Coal Company,	354,119
Hillside Coal and Iron Company,	180,757
Archbald Coal Company,	150,665
Humbert Coal Company,	53,110
West Mountain Coal Company,	20,009
Fall Brook Coal Company,	4,279
Total,	4,007,147

Production by Counties

Lackawanna,	4,007,147

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Delaware and Hudson Co.,	19	1	20	47	13	60	143,649	58,071	4,612	1,362	5,974	243	1,362	98	105
Temple Coal Co.,	4	.....	4	4	1	5	128,920	128,720	721	177	898	180	.....	180	177
Scranton Coal Co.,	6	.....	6	5	.....	5	59,020	70,824	648	259	907	108	.....	130	.....
Hillside Coal and Iron Co.,	1	1	2	.....	.....	.....	180,757	.....	228	102	330	228	102	.....	.....
Archbald Coal Co.,	3	.....	3	3	.....	3	50,222	50,222	316	89	405	105	.....	105	.....
Humbert Coal Co.,	2	.....	2	.....	.....	.....	26,555	.....	80	63	143	40	.....	.....	.....
West Mountain Coal Co.,	.....	.....	.....	1	.....	1	.....	.....	41	21	62	.....	.....	41	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	23	8	31	.....	.....	.....	.....
Totals and averages,	35	2	37	60	14	74	114,490	66,786	6,669	2,081	8,750	191	1,041	111	149

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	1	....	....	1	....	....	....	1	....	....	3	8.57
Falls of roof,	2	1	....	2	2	1	1	3	2	1	1	2	18	51.43
Mine cars,	....	2	....	1	....	....	....	....	....	2	1	1	7	20.00
Suffocation by gas, etc.,	1	....	....	....	....	....	....	....	....	....	....	....	1	2.86
Explosions of powder and dynamite,	....	....	....	1	....	1	....	....	....	....	....	....	2	5.71
Blasts, premature and otherwise,	....	....	....	....	....	....	....	....	3	....	....	....	3	8.57
Scalded by steam,	....	1	....	....	....	....	....	....	....	....	....	....	1	2.86
Totals,	3	4	1	4	2	3	1	3	5	4	2	3	35	100.00
Outside														
By falling,	....	....	....	....	....	....	....	1	....	....	....	....	1	50.00
Hot culm,	....	....	....	1	....	....	....	....	....	....	....	....	1	50.00
Totals,	....	....	....	1	....	....	....	1	....	....	....	....	2	100.00
Grand totals inside and outside,	3	4	1	5	2	3	1	4	5	4	2	3	37	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	....	....	....	....	....	....	1	....	1	2	3.33
Falls of roof,	2	5	2	1	3	2	3	1	2	2	1	1	25	41.66
Mines cars,	1	....	1	....	....	2	1	2	....	....	2	....	9	15.00
Explosions of powder and dynamite,	1	1	....	2	....	....	1	....	....	....	1	....	6	10.00
Blasts, premature and otherwise,	....	....	....	....	....	2	....	....	1	....	....	....	3	5.00
Falling into shafts,	....	....	....	....	....	....	....	....	....	....	1	....	1	1.67
Mules,	....	....	....	1	1	1	1	....	1	....	....	....	5	8.33
Struck by timber,	1	....	....	1	....	....	....	....	....	....	1	....	3	5.00
Scalded by steam,	....	2	....	....	....	....	....	....	....	....	....	....	2	3.33
Struck by rope,	....	....	....	1	....	....	....	....	....	....	....	....	1	1.67
Struck by rock,	....	....	....	....	....	....	1	....	....	....	....	....	1	1.67
Struck by drill,	....	....	....	....	....	....	1	....	....	....	....	....	1	1.67
Struck by lever,	....	....	....	....	....	....	....	....	1	....	....	....	1	1.67
Totals,	5	8	3	6	4	7	8	3	5	3	6	2	60	100.00
Outside														
Cars,	....	....	2	1	1	....	1	....	....	1	....	....	6	42.86
Machinery,	....	....	....	....	....	....	....	1	....	....	....	....	1	7.14
By falling,	....	1	2	....	1	....	....	....	....	....	....	1	5	35.72
Struck by timber,	1	....	....	....	....	....	....	....	....	....	....	....	1	7.14
Struck by rivet,	....	1	....	....	....	....	....	....	....	....	....	....	1	7.14
Totals,	1	2	4	1	2	....	1	1	....	1	....	1	14	100.00
Grand totals inside and inside,	6	10	7	7	6	7	9	4	5	4	6	3	74	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2	1	....	3	2	1	....	2	3	1	1	1	17
Miners' laborers,	1	2	1	....	....	2	1	1	2	1	....	1	12
Drivers and runners,	....	....	....	....	....	....	....	....	....	1	....	....	1
Footmen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Brakemen,	....	....	....	1	....	....	....	....	....	....	....	....	1
Engineers,	....	1	....	....	....	....	....	....	....	....	1	....	2
Totals,	3	4	1	4	2	3	1	3	5	4	2	3	35
Outside													
Electricians,	....	....	....	....	....	....	....	1	....	....	....	....	1
Laborers,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	....	....	....	1	....	....	....	1	....	....	....	....	2
Grand totals inside and outside,	3	4	1	5	2	3	1	4	5	4	2	3	37

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	4	2	1	2	2	3	5	1	2	2	2	1	27
Miners' laborers,	....	6	1	2	2	2	1	1	2	1	2	1	21
Drivers and runners,	1	....	1	1	....	1	1	....	1	....	1	....	7
Doorboys and helpers,	....	....	....	....	....	1	....	....	....	....	....	....	1
Footmen,	....	....	....	....	....	....	....	....	....	....	1	....	1
Brakemen,	....	....	....	1	....	....	1	1	....	....	....	....	3
Total,	5	8	3	6	4	7	8	3	5	3	6	2	60
Outside													
Miners,	....	....	1	....	....	....	....	....	....	....	....	....	1
Runners,	....	....	....	....	1	....	....	....	....	....	....	....	1
Drivers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Slatepickers (boys),	....	....	....	....	....	....	....	1	....	....	....	....	1
Watchmen,	....	....	....	....	....	....	....	....	....	....	....	1	1
Engineers,	....	....	1	....	....	....	....	....	....	....	....	....	1
Laborers,	1	2	2	1	1	....	1	....	....	....	....	....	8
Totals,	1	2	4	1	2	....	1	1	....	1	....	1	14
Grand totals inside and outside,	6	10	7	7	6	7	9	4	5	4	6	3	74

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	1	....	2	....	....	....	1	....	....	....	1	5
English,	....	....	....	....	....	....	....	....	....	1	....	....	1
Welsh,	....	....	....	1	1	....	....	....	....	....	....	....	2
Polish,	1	1	....	....	1	1	....	....	2	1	1	....	8
Italian,	1	1	....	2	....	1	....	1	1	1	1	2	11
Slavonian,	....	....	1	....	....	1	....	....	....	1	....	....	3
Lithuanian,	....	....	....	....	....	....	1	....	....	....	....	....	1
Austrian,	1	....	....	....	....	....	....	....	1	....	....	....	2
Russian,	....	1	....	....	....	....	....	2	1	....	....	....	4
Totals,	3	4	1	5	2	3	1	4	5	4	2	3	37

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	3	4	3	3	....	4	3	1	3	1	3	29
English,	1	....	....	....	....	....	....	....	....	....	1	....	2
Welsh,	....	1	....	....	....	1	1	....	1	....	....	....	4
Irish,	....	....	....	....	1	....	....	....	....	....	....	....	1
German,	....	1	....	1	....	....	....	....	....	....	....	....	2
Polish,	....	4	....	1	1	3	1	....	....	....	3	....	13
Italian,	2	....	2	1	....	2	2	1	2	1	....	....	13
Slavonian,	1	....	1	....	....	1	....	....	....	....	....	....	3
Lithuanian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Austrian,	1	....	....	....	....	....	....	....	....	....	....	....	1
Russian,	....	1	....	....	1	....	1	....	1	....	1	....	5
Totals,	6	10	7	7	6	7	9	4	5	4	6	3	74

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Delaware and Hudson Co.												12	285,000	282,000	286,500	800
Olyphant Colliery:																
Grassy Island No. 2, ...	Shaft, ...	Gaseous,..	3 Fans, .	23	7.5	8	60	2	Guibal, ...	Steam,.....		4	90,000	84,500	125,000	586
Grassy Island No. 2, ...	Slope, ...			20	7	7	70	3								
				18	5	5	70	1								
Coal Brook Colliery:												2	40,000	30,000	50,000	125
Coal Brook No. 1, ...	Tunnel, .	Non-gas.,	Fan, ...	17	4.25	4.25	75	1.7	Guibal, ...	Electricity,		2	45,000	37,000	50,000	150
Coal Brook No. 1, Grassy,	Drift, ...			17	4.25	4.25	90	1.2				3	65,000	58,000	75,000	195
Coal Brook No. 2, Grassy,	Drift, ...			17	4.25	4.25	75	1.5				2	50,000	45,000	55,000	145
Coal Brook No. 3 Grassy,	Drift, ...			12	4	4	90	.5				5	90,000	80,000	95,000	250
Coal Brook, Wilces, ...	Drift, ...			20	5	5	75	1.5				4	80,000	72,000	90,000	191
Coal Brook, Wilson Creek,	Tunnel, .			20	5	6	75	1.2				2	55,000	48,000	62,000	150
Coal Brook No. Q Pattens	Tunnel, .			10	2.5	2.5	100	.5								
Powderly Colliery:												2	50,000	45,000	55,000	170
Powderly, ...	Tunnel, .	Non-gas.,	Natural,	....	....	....	....	....	Guibal, ...	Steam,.....		1	25,000	19,000	20,000	100
Powderly, ...	Slope, ..		Fan, ...	17	4	4	80	1.2	Guibal, ...	Electricity,		4	85,000	80,000	90,000	250
Powderly No. 1, ...	Tunnel, .		Fan, ...	10	4	4	140	1	Guibal, ...	Electricity,		2	25,000	18,000	28,000	114
Powderly No. 1, ...	Slope, ...		Fan, ...	10	8.5	2.5	140	1	Buffalo, ..	Electricity,						
Jermyn Colliery:												13	260,000	250,000	275,000	630
Jermyn, ...	Slope, ...	Non-gas..	3 Fans, .	29	5	6	75	1.5	Guibal, ..	Steam,.....						
				17	5	6	75	1		Steam,.....						
				17	5	6	100	1.2		Electricity,.						

Gravity Slope Colliery:																
Gravity Slope,	Slope,	Non-gas.,	Fan,	20	5	6	60	.5	Guibal,	Steam,	2	45,000	40,000	48,000	170
No. 11,	Tunnel,			17	5	5	90	1.6			4	80,000	75,000	85,000	390
No. 6,	Drift,			10	8	3	100	.8			2	40,000	32,000	45,000	146
Temple Coal Co.																
Sterrick Creek Colliery:																
Sterrick Creek,	Drift,	Non-gas.,	3 Fans,	20	4.5	4.5	70	1.3	Guibal,	Steam,	4	85,000	80,000	90,000	350
Sterrick Creek,	Slope,	Non-gas.,		25	5	5.5	65	.8	Guibal,	Steam,	6	100,000	90,000	110,000	371
				10	3.5	3.5	180	.5	Guibal,	Steam,					
Scranton Coal Co.																
Raymond Colliery:																
Raymond No. 3,	Slope,	Non-gas.,	Fan,	14	6	5	100	1.2	Guibal,	Steam,	4	90,000	85,000	95,000	375
Raymond No. 2,	Slope,	Non-gas.,	Fan,	18	5	5	75	.7	Guibal,	Steam,	2	35,000	30,000	38,000	132
Riverside Colliery:																
Riverside,	Shaft,	Gaseous,	Fan,	20	4	6	75	.4	Guibal,	Steam,	3	75,000	60,000	80,000	141
Hillside Coal and Iron Co.																
Erie Colliery:																
Erie,	Shaft,	Non-gas.,	Fan,	18	5	5	75	.2	Guibal,	Steam,	3	70,000	60,000	72,000	228
Archbald Coal Co.																
Tappans Colliery:																
Tappans,	Slope,	Non-gas.,	2 Fans,	16	5	6	72	.5	Guibal,	Steam,	8	125,000	100,000	135,000	316
				12	3	3	80	.5							
Humbert Coal Co.																
Sunnyside Colliery:																
Sunnyside,	Drift,	Non-gas.,	Fan,	6	3	4	90	.6	Guibal,	Steam,	2	30,000	22,000	32,000	80
West Mountain Coal Co.																
West Mountain Colliery:																
West Mountain,	Drift,	Non-gas.,	Fan,	12	3	2	75	.7	Guibal,	Steam,	1	14,000	12,000	16,000	41
Fall Brook Coal Co.																
Murrins Colliery:																
Murrins,	Drift,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	6,000	4,000	6,500	23

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Delaware and Hudson Co. Olyphant, Coal Brook, Powderly, Jermyn, Gravity Slope, Jermyn Washery,	Lackawanna, ..	C. C. Rose, ...	Scranton, ...	E. R. Pettebone, ...	Dorranceton, ...	Delaware and Hudson
Temple Coal Co. Sterrick Creek, ...	Lackawanna, ..	Frank Hemelright, ..	Scranton, ...	Joseph Reese, ...	Olyphant, ...	Erie
Scranton Coal Co. Raymond, Riverside,	Lackawanna, ..	William L. Allen, ..	Peckville, ...	John J. Aitken, ...	Priceburg, ...	N. Y. O. and W.
Hillside Coal and Iron Co. Erie, ...	Lackawanna, ..	W. W. Inglis, ...	Scranton, ...	J. P. Jennings, ...	Moosic, ...	Erie
Archbald Coal Co. Tappans, ...	Lackawanna, ..	James H. Hughes, ..	Wilkes-Barre, ...	Richard Howells, ...	Archbald, ...	Delaware and Hudson
Humbert Coal Co. Sunnyside, ...	Lackawanna, ..	W. C. Humbert, ...	Jessup, ...	.....	.....	Erie
West Mountain Coal Co. West Mountain, ...	Lackawanna, ..	John A. Komara, ...	Jermyn, ...	Thomas Kennedy, ..	Jermyn, ...	N. Y. O. and W.
Fall Brook Coal Co. Murrins, ...	Lackawanna, ..	Frank Murrin, ...	Carbondale, ...	.....	.....	Local sales

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
*Delaware and Hudson Co.													
Olyphant,	Lackawanna,	718,960	117,196	15,563	851,719	263	1,786	12	16	1,050,000	8,537	30,025	114
Coal Brook,		609,613	41,491	.....	651,104	270	1,536	1	12	671,075	77,455	2,739	80
Powderly,		382,327	30,449	.....	412,776	276	853	2	10	220,650	27,133	5,713	77
Jermyn,		358,219	30,355	5,807	394,381	257	833	2	10	319,500	33,607	.....	54
Gravity Slope,		336,226	49,050	5,302	390,578	265	963	3	12	324,575	143,135	6,378	60
Totals,		2,403,345	268,541	26,672	2,700,558	.....	5,974	20	60	2,585,800	289,867	44,855	385
Washeries: Jermyn,	Lackawanna,	19,232	9,539	.....	28,771	†	†	.....	.....	.....	.....	.....	.....
Totals,		2,424,577	278,080	26,672	2,729,329	.....	5,974	20	60	2,585,800	289,867	44,855	385
Temple Coal Co.													
Sterrick Creek,	Lackawanna,	481,013	29,144	4,722	514,879	261	898	4	5	282,125	104,225	.....	104
Scranton Coal Co.													
Raymond,	Lackawanna,	226,638	27,367	1,548	255,553	223	692	3	4	168,625	181,750	.....	68
Riverside,		67,697	30,295	574	98,566	197	215	3	1	61,875	7,900	.....	28
Totals,		294,335	57,662	2,122	354,119	.....	907	6	5	230,500	189,650	.....	96
Hillside Coal and Iron Co.													
Erie,	Lackawanna,	159,039	20,884	834	180,757	220	330	2	.....	104,375	4,050	12,150	23

*Inside workings under Delaware and Hudson Company; outside workings under Hudson Coal Company.
†Employes and number of days worked included with Jermyn Colliery.

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Archbald Coal Co.													
Tappans,	Lackawanna,	141,193	9,093	379	150,665	260	405	3	3	126,500	96,575	.....	30
Humbert Coal Co.													
Sunnyside,	Lackawanna,	46,733	6,125	252	53,110	93	143	2	.....	25,625	11,400	.....	15
West Mountain Coal Co.													
West Mountain,	Lackawanna,	13,762	1,825	4,422	20,009	280	62	.....	1	31,500	2,700	.....	18
Fall Brook Coal Co.													
Murrins,	Lackawanna,	1,258	300	2,721	4,279	154	31	.....	.....	500	400	.....	5
Grand totals,	.....	3,561,910	463,113	42,124	4,007,147	.....	8,750	37	74	3,386,925	698,867	57,005	676

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Delaware and Hudson Co.,	Lackawanna,	30	810	47	11,227	12,037	.....	19	17	58	187	17,597	33	59,250	14,400	13	6
Temple Coal Co.,		....	.....	8	1,800	1,800	.....	2	.....	4	27	2,700	3	2,700	2,200	4	2
Scranton Coal Co.,		....	.....	18	2,200	2,200	.....	3	.....	2	31	2,618	11	7,150	5,509	2	2
Hillside Coal and Iron Co.,		....	.....	11	1,340	1,340	.....	.....	.....	5	25	1,295	2	1,732	1,560	2	2
Archbald Coal Co.,		....	.....	5	700	700	.....	2	.....	.....	15	756	1	1,250	800	.....	2
Humbert Coal Co.,		....	.....	3	240	240	.....	2	.....	.....	8	225	.....	.....	.....	.....	.....
West Mountain Coal Co.,		....	.....	2	300	300	.....	.....	.....	.....	2	145	.....	.....	.....	.....	.....
Fall Brook Coal Co.,		....	.....	1	150	150	.....	1	.....	.....	2	100	.....	.....	.....	.....	.....
Totals,	.....	30	810	95	17,957	18,767	.....	29	17	69	297	25,436	50	72,082	24,469	21	14

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Delaware and Hudson Coal Co.,	Lackawanna,	6	16	6	1,381	1,864	483	183	16	452	205	4,612	....	10	53	160	85	329	13	712	1,362	5,974
Temple Coal Co.,		2	1	5	200	290	90	13	3	55	62	721	1	1	13	16	....	40	4	102	177	898
Scranton Coal Co.,		2	4	....	249	217	89	16	13	....	58	648	....	2	16	33	76	17	2	113	259	907
Hillside Coal and Iron Co.,		1	2	....	80	86	13	4	1	40	1	228	....	1	4	6	18	6	1	66	102	330
Archbald Coal Co.,		1	2	....	115	120	37	9	1	31	....	316	1	1	7	11	9	8	1	51	89	405
Humbert Coal Co.,		1	2	....	36	28	11	....	....	2	....	80	1	1	3	5	19	1	2	31	63	143
West Mountain Coal Co.,		1	....	....	16	10	6	....	....	6	2	41	1	1	2	2	7	1	1	5	21	62
Fall Brook Coal Co.,		1	....	....	7	10	3	....	....	2	....	23	....	....	1	1	3	1	1	1	8	31
Totals,		15	27	11	2,084	2,625	732	225	34	588	328	6,669	4	17	100	234	217	403	25	1,081	2,081	8,750

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Delaware and Hudson Co.,	Lackawanna,	22	20	19	21	22	23	24	23	23	24	22	23	266
Temple Coal Co.,		25	20	20	22	22	23	23	22	21	22	20	21	261
Scranton Coal Co.,		18	13	17	17	18	18	18	18	18	17	18	20	210
Hillside Coal and Iron Co.,		15	16	19	17	19	20	19	20	19	20	16	20	220
Archbald Coal Co.,		24	21	21	23	22	23	20	19	21	22	21	23	260
Humbert Coal Co.,		20	13	11	3	.....	.....	.....	3	11	13	11	8	93
West Mountain Coal Co.,		25	23	23	24	22	23	21	24	24	22	24	25	280
Fall Brook Coal Co.,		24	23	25	15	10	.....	.....	.....	.....	10	23	24	154

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 10	Charles Blosykie, ..	Polish, ...	Laborer, ..	30	M.	1	....	Powderly, ...		Fatally injured by fall of roof near pillar that was being removed, while shoveling coal.
16	Peter Stackey, ...	Austrian, ...	Miner, ...	33	M.	1	4	Tappans, ...		Fatally injured by being suffocated by gas in cross-cut. He returned too soon after firing a shot and was overcome by the gases, falling unconscious in cross-cut where three hours later he was found dead. The vein is less than 3 feet.
21	John Lennutti, ...	Italian, ...	Miner, ...	48	M.	1	3	Raymond, ...		Fatally injured by fall of middle rock in the vein while shoveling coal at face of chamber.
Feb. 17	Connilli Cinci, ...	Italian, ...	Miner, ...	23	S.	....	....	Sunnyside, ...		Fatally injured by mine car catching him against pillar while helping a driver to get car out of a dip road, where he was taking a pillar out.
21	David Davis, ...	American, ..	Engineer, .	19	S.	....	....	Olyphant, ...	Lackawanna,	Fatally injured by motor running over him on heading road. While taking a trip of cars out the heading the rear car became derailed and jerked the motor, which threw him off under the motor.
23	Michael Mushack, ...	Russian, ...	Laborer, ..	35	M.	1	2	Jermyn, ...		Fatally injured by fall of roof back from face of heading.
25	George Slopa, ...	Polish, ...	Laborer, ..	27	M.	1	1	Jermyn, ...		Fatally injured by escaping steam from steam pipe in pump room. He was assisting to remove some timbers from over a pump when a steam valve burst. Two other men were burned by this accident.
March 14	George Petonyok, ...	Slavonian, .	Laborer, ..	32	M.	1	2	Olyphant, ...		Fatally injured by fall of coal at face of chamber.
April 4	Hugh Conway, ...	American, ..	Miner, ...	40	M.	1	4	Gravity Slope, ..		Fatally injured by powder that was ignited while he was preparing cartridge in cross-cut near face of chamber.
14	Cosmo Mostereno, ..	Italian, ...	Laborer, ..	40	M.	1	...	Erie, ...		Fatally injured by being burned by hot culm dust rushing on him from burning culm bank, while washing culm into conveyor line. Outside.

April	25	William R. Jones, ...	Welsh, ...	Miner, ...	44	M.	1	2			Fatally injured by fall of roof at face of airway while barring out loose coal.
	25	Zaob Antonie, ...	Italian, ...	Miner, ...	35	M.	1	2	Riverside, ...		Fatally injured by fall of roof at face of pillar that he was removing. He had tried to take the roof down a short time previous and then went back under it again.
	28	Joseph Lucasyzk, ...	American, ..	Brakeman,	18	S.	....	....	Olyphant, ...		Fatally injured by motor along heading road. He took the motor to a charging station for air. The motor engineer was not with him, and in some manner Lucasyzk fell under the motor.
May	1	Owen Owens, ...	Welsh, ...	Miner, ...	32	M.	1	4	Powderly, ...		Fatally injured by fall of roof at face of heading. He was returning to ignite a squib that had missed fire when a large fall caught him.
	27	Joseph Ourban, ...	Polish, ...	Miner, ...	37	M.	1	3	Raymond, ...		Fatally injured by fall of roof at face of chamber while assisting laborer to load car.
June	8	John Bednash, ...	Polish, ...	Miner, ...	32	M.	1	....	Tappans, ...		Fatally injured by explosion of dynamite and blasting powder while tamping charge in hole at face of chamber.
	10	Nazarine Otony, ...	Italian, ...	Laborer, ..	46	M.	1	5	Raymond, ...		Fatally injured by fall of coal at face of chamber while shoveling coal.
	24	Michael Bafeia, ...	Slavonian, .	Laborer, ..	49	S.	....	....	Sterrick Creek,	Lackawanna,	Fatally injured by fall of roof near face of pillar.
July	2	Walter Dubnocik, ...	Lithuanian,	Laborer, ..	25	S.	....	....	Gravity Slope, ..		Fatally injured by fall of roof 20 feet from face of chamber. He was returning to the face after a shot had been fired.
Aug.	8	Alvin J. Boorem, ...	American, ..	Electrician,	19	S.	...	....	Olyphant, ...		Fatally injured by falling from tower of shaft to the ground, a distance of 12 feet. He was helping to lower an electric cable down the shaft and the cable slipped from where it was considered safely secured and struck him on the head, knocking him from the tower. Outside.
	20	Alexander Voytus, ..	Russian, ...	Miner, ...	37	M.	1	4	Olyphant, ...		Fatally injured by fall of roof at face of chamber when he returned after firing a blast.
	24	Frank Mandilla, ...	Italian, ...	Miner, ...	39	M.	1	2	Erie, ...		Fatally injured by fall of roof while taking out pillar on heading road.
	25	Peter Bignuts, ...	Russian, ...	Laborer, ..	38	M.	1	2	Sterrick Creek,		Fatally injured by fall of roof while loading car at pillar that was being removed.
Sept.	12	Toney Keller, ...	Austrian, ...	Laborer, ..	21	S.	....	....	Sunnyside, ...		Fatally injured by fall of roof at face of heading. Timbers were not set close enough to protect the roof properly.
	17	Barry Shulan, ...	Russian, ...	Miner, ...	25	S.	....	....	Olyphant, ...		Fatally injured by fall of roof at face of chamber when he returned after firing a blast.
	21	Bennie Betti, ...	Italian, ...	Miner, ...	45	M.	1	5	Sterrick Creek,		Fatally injured by flying coals from blast. He was firing a blast in a pillar that he was removing, and after igniting the squib he walked leisurely away down the chamber and was struck by flying coals.

TABLE 4—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Sept. 30	John Grogenski, ...	Polish,.....	Miner, ...	33	M.	1	2	Olyphant, ...	Lackawanna,	Fatally injured by flying coals from a blast they were preparing. While tamping the charge at face of chamber in some unknown manner it was ignited.
	John Gingen, ...	Polish, ...	Laborer, ..	24	M.	1	1			
Oct. 1	Ernest Webb, ...	English,....	Footman, .	18	S.	....	....	Sterrick Creek,		Fatally injured by mine cars on inside slope. He forgot to throw the switch for the track he intended the cars to run in on, and the cars ran in on the track on which he was standing.
3	Joseph Keuzeza, ...	Polish, ...	Runner, .	22	S.	...	....	Olyphant, ...		Fatally injured by mine car. He was running car from chamber when it jumped off the track and caught him against the gob.
8	John Grouse, ...	Slavonian, .	Laborer, ..	35	M.	1	...	Olyphant, ...		Fatally injured by fall of coal at face of chamber. The miner stated that he had fired a shot and told the laborer not to go back until he had examined the place.
23	Karl Urbane, ...	Italian, ...	Miner, ...	44	M.	1	1	Riverside, ...		Fatally injured by fall of roof at face of pillar that he was removing.
Nov. 13	Joseph Tetti, ...	Italian, ...	Miner, ...	36	M.	1	6	Riverside, ...		Fatally injured by fall of roof while removing pillar on heading road. He cut a prop out that was supporting a piece of roof.
25	Alex. Valenjick, ...	Polish, ...	Engineer, .	18	S.	....	....	Coal Brook, ...		Fatally injured by being crushed between motor and loaded car. He ran two loaded cars out the heading road and was following them with his motor, when the cars jumped off the track and he ran into them.
Dec. 1	William Maffei, ...	Italian, ...	Laborer, ..	38	M.	1	5	Olyphant, ...		Fatally injured by fall of roof near face of pillar that was being removed. The roof was working and the miner and his two laborers went back to a place of safety for a while. Maffei then returned to the face to run the car down when a fall occurred and caught him.

Dec.	23	Martin Roach, ...	American, ..	Miner, ...	38	M.	1	1	Gravity Slope, ..	Lackawanna,		Fatally injured by fall of roof at face of heading. He fired two shots in top bench, one on each side, and was trimming down the sides when a large piece of roof fell on him.
	30	Cirano Gaporo, ...	Italian, ...	Driver, ...	19	S.	....	....	Tappans, ...			Fatally injured by falling under mine cars on heading road. When the mule started the trip of three loaded cars he attempted to jump on the front end of the first car and slipped and fell under it.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 7	Joseph Vassh, ...	Austrian, ...	Miner, ...	34	M.	Sterrick Creek.		Leg fractured by fall of roof at face of chamber while drilling hole.
12	Anthony Margar, ...	Italian, ...	Miner, ...	25	S.	Tappans, ...		Face and hands burned by blasting powder, while preparing to tamp the charge.
19	Louie Alberta, ...	Italian, ...	Miner, ...	35	M.	Sterrick Creek.		Compound fracture of leg by fall of roof at face of chamber while barring out loose coal.
24	Thomas Carden, ...	American, ..	Miner.	43	M.	Coal Brook, .		Two ribs fractured and chest bruised by collar falling on him while trying to place it in proper position.
28	Charles Hill, ...	English, ...	Driver, ...	17	S.	West Mountain,		Compound fracture of leg by being caught by mine car on heading road. The car jumped off the track.
	Michael Lopatosky, .	Slavonian, .	Laborer, ...	43	M.	Coal Brook, ...		Ruptured while loading props into mine car. Outside.
Feb. 2	A. F. McGinniss, ...	American, ..	Laborer, ...	50	M.	Sterrick Creek,		Eye knocked out while cutting rivets from a conveyor line, one struck him in the eye. Outside.
10	Mozart Lewis, ...	Welsh, ...	Miner, ...	55	M.	Gravity Slope, .	Lackawanna,	Arms and hands burned by blasting powder. While preparing a cartridge in cross-cut his lamp fell into the powder.
	Stina Zowada, ...	Polish, ...	Laborer, ...	30	S.	Coal Brook, ...		Wrist and two bones fractured near elbow by a piece of roof falling on him at face of chamber.
11	William Koralaskie. .	Polish, ...	Miner, ...	37	S.	Gravity Slope, .		Ankle fractured by fall of roof at face of chamber while drilling hole.
12	Owen McCann, ...	American, ..	Laborer, ...	33	S.	Powderly, ...		Arm fractured by falling off wagon. The team he was driving gave a jerk, which threw him off the wagon. Outside.
17	Lewis Harr, ...	German, ...	Laborer, ...	48	M.	Tappans, ...		Leg fractured by fall of roof at face of chamber while barring loose coal.
19	Alex Polonky, ...	Russian, ...	Laborer, ...	36	S.	Olyphant, ...		Leg fractured by fall of roof at face of gangway.
21	William Deecke, ...	American, ..	Laborer, ...	46	M.	Gravity Slope, .		Leg fractured by fall of roof at face of gangway.

Feb.	25	Lawrence Ostrosky,	Polish, ...	Laborer, ...	36	M.	Jermyn, ...		Face, hands and body burned by escaping steam from steam pipe in pump room.
		Joseph Betrosky, ..	Polish, ...	Laborer, ...	37	M.			The valve on steam pipe burst.
March	10	Thomas Jerome, ...	Italian, ...	Laborer, ...	48	M.	Olyphant, ...		Three ribs fractured and ankle sprained by an ash car squeezing him against side of building. Outside.
	14	John F. Boland, ...	American, ..	Miner, ...	53	M.	Coal Brook, ...		Nose fractured and face lacerated by loaded mine car on which he was riding on his way home. Outside.
	16	John Davis, ...	American, ..	Driver, ...	19	S.	Jermyn, ...		Finger taken off by being crushed between motor and mine car on heading road.
		Theodore Guslavits, ..	Slavonian, .	Miner, ...	43	M.	Sterrick Creek,		Two ribs fractured and body bruised by fall of roof while drilling hole at face of pillar.
	21	Balda Pompanko, ...	Italian, ...	Laborer, ...	25	S.	Raymond, ...		Spine injured by fall of roof at face of chamber while barring some loose coal.
	27	Sylvanus Smith, ...	American, ..	Laborer, ...	69	M.	Olyphant, ...		Rib fractured by falling on props in prop yard. Outside.
	28	Miles D. Carpenter, ..	American, ..	Engineer, ...	71	M.	Olyphant, ...		Two ribs fractured by falling off retaining wall on his way home. Outside.
April	3	John Morsey, ...	Lithuanian,	Laborer, ...	30	S.	Gravity Slope, .		Foot cut off by fall of roof at face of chamber while loading car.
	4	Joseph Walsh, ...	American, ..	Brakeman, ...	19	S.	Powderly, ...		Leg fractured by a rope striking him while lowering loaded car from chamber.
	15	Edward Stack, ...	Polish, ...	Miner, ...	33	M.	Gravity Slope. .	Lackawanna,	Face badly crushed and hand blown off by dynamite exploding while forcing the powder into hole.
	27	Thomas Molinaro, ...	Italian, ...	Laborer, ...	27	M.	Coal Brook, ...		Collar bone fractured by mine car near breaker. Outside.
	27	Ray Palhamous, ...	American, ..	Laborer, ...	32	S.	Olyphant, ...		Leg fractured by prop falling on him while unloading props from car on heading road.
		Rudolph Lagner, ...	American, ..	Miner, ...	30	S.	Gravity Slope, .		Arm burned by powder that exploded while forcing it into hole at face of chamber.
	28	William Heidrick, ..	German, ...	Driver, ...	20	S.	Gravity Slope, .		Arm fractured by falling off mule on his way to mule barn.
May	2	Jacob Novisky, ...	Polish, ...	Laborer, ...	38	M.	Coal Brook, ...		Head and body injured by fall of roof in chamber. A mine car became derailed, which discharged a timber, allowing the roof to fall.
	12	Joseph Crane, ...	American, ..	Runner, ...	19	S.	Powderly, ...		Foot crushed by mine car while unhitching a haulage rope from trip of loaded cars. Outside.
	16	Lucas Casher, ...	Russian, ...	Laborer, ...	32	M.	Jermyn, ...		Leg bruised by mule falling on him on heading road.
		Michael Horan, ...	American, ..	Miner, ...	33	S.	Powderly, ...		Leg fractured and body bruised by fall of roof at face of heading while preparing to stand some timber.
	19	Patrick Cleary, ...	Irish, ...	Miner, ...	38	M.	Powderly, ...		Leg fractured by fall of roof at face of pillar while preparing to stand prop.
	25	Jesse Avery, ...	American, ..	Laborer, ...	50	M.	Jermyn, ...		Ribs fractured and injured otherwise by falling off wagon on which he was riding while driving a team of mules. Outside.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
June 5	John Antonio, ...	Polish, ...	Doorboy, ...	17	S.	Jermyn, ...		Arm fractured by falling off a mule while riding to the barn.
12	Amoral Berdine, ...	Italian, ...	Miner, ...	24	M.	Riverside, ...		Face, neck and body bruised and burned by powder exploding in a hole while tamping it, at face of chamber.
	Edwin Daniels, ...	Welsh, ...	Miner, ...	50	M.	Olyphant, ...		Leg fractured by fall of roof at face of chamber.
20	Michael Nano, ...	Slavonian, ..	Runner, ...	18	S.	Olyphant, ...		Leg fractured by being squeezed between empty car and pillar. Car jumped off the track at latches on heading road.
	Stephen Shurky, ...	Polish, ...	Laborer, ...	22	S.	Jermyn, ...		Leg fractured by mine car at face of chamber. He loaded the front end of car too full, which, caused it to tip and the rear end of car caught him.
	Salvatore Lugia, ...	Italian, ...	Laborer, ...	42	M.	Tappans, ...		Face, arms and head injured by flying coals from shot. A shot fired in the adjoining chamber burst through the pillar.
	John Rushofsky, ...	Polish, ...	Miner, ...	40	M.	Raymond, ...	Lackawanna,	Leg fractured by fall of roof at face of chamber while helping to load car.
July 6	Stephen Wadock, ...	Russian, ...	Laborer, ...	30	S.	Powderly, ...		Head and body bruised by fall of roof at face of chamber while replacing prop that had been discharged.
13	Michael Mahor, ...	American, ..	Miner, ...	50	S.	Coal Brook, ...		Three ribs fractured by fall of roof at face of chamber while barring down coal.
	Daniel Parry, ...	Welsh, ...	Miner, ...	53	M.	Olyphant, ...		Rib fractured by drill slipping and striking him while barring coal at face of chamber.
14	John Wrightson, ...	American, ..	Brakeman, ...	18	S.	Olyphant, ...		Instep fractured. A motor crushed his foot against the bottom rock while going around a curve on heading road.
18	Louis Motz, ...	Italian, ...	Laborer, ...	38	S.	Gravity Slope, .		Great toe broken by being caught between two empty cars. He was lifting a car on the track when another car ran into him. Outside.
	Christopher Taylor, ..	American, ..	Miner, ...	53	M.	Coal Brook, ...		Ruptured by lifting a piece of rock in face of chamber.

July	20	John Lyons, ...	American, ..	Runner, ...	19	S.	Gravity Slope, .	Lackawanna,	Arm fractured by faling off mule along the heading road.
	27	Dominick Rotelle, ...	Italian, ...	Miner, ...	27	M.	Powderly, ...		Hand seriously burned by powder while preparing a cartridge. He ignited the powder with his lamp.
	28	Herman Lucasian, ...	Polish, ...	Miner, ...	43	M.	Raymond, ...		Leg fractured by fall of roof at face of chamber.
Aug.	5	Bornam Jussippe, ...	Italian, ...	Miner, ...	30	M.	Olyphant, ...		Compound fracture of arm and back injured by fall of roof at face of chamber.
	6	Earl Pierce, ...	American, ..	Brakeman, ...	19	S.	Olyphant, ...		Hand crushed by an empty car running over it on main road while he was holding a latch.
	13	Harry Race, ...	American, ..	Laborer, ...	32	S.	Gravity Slope, .		Legs fractured by trip of empty cars which uncoupled on slope and caught him at face of slope.
	21	James Perri, ...	American, ..	Slatepicker, ...	16	S.	Coal Brook, ...		Arm fractured by being caught on a revolving shaft in breaker. Outside.
Sept.	8	Naxarino Patrone, ..	Italian, ...	Miner, ...	29	S.	Raymond, ...		Spine seriously injured by fall of roof at face of chamber while drilling hole.
	11	Joseph Lordges, ...	Russian, ...	Laborer, ...	31	M.	Powderly, ...		Body injured by a lever striking him while he was assisting to replace a car on track.
	16	Frank Golia, ...	Italian, ...	Laborer, ...	21	S.	Gravity Slope, .		Ankle broken and injured about the loins by fall of roof at face of adjoining chamber while assisting laborer to load his car.
	17	William T. Williams,	Welsh, ...	Miner, ...	54	M.	Olyphant, ...		Head, back and hand injured by flying coals from a blast. The squib missed fire and he returned to face with another squib when the blast fired.
	29	Joseph Dinner, ...	American, ..	Driver, ...	19	S.	Jermyn, ...		Leg fractured by being thrown from a mule while riding out the heading road.
Oct.	17	Louis Truppa, ...	Italian, ...	Laborer, ...	22	S.	Jermyn, ...		Legs fractured by fall of roof at face of chamber while assisting miner to stand prop.
	20	William McHale, ...	American, ..	Miner, ...	33	S.	Gravity Slope, .		Back and chest injured by fall of top coal at face of chamber.
	22	Dominick Figliomen,	American, ..	Driver, ...	16	S.	Powderly, ...		Great toe servered from foot by mine car. He attempted to get on car, slipped and fell under it. Outside.
	28	Anthony McHugh, ..	American, ..	Miner, ...	40	M.	Olyphant, ...		Spine injured by fall of roof at face of chamber.
Nov.	1	Frank Chyleski, ...	Polish, ...	Laborer, ...	58	S.	Coal Brook, ...		Arm fractured by falling down air shaft.
	12	Cornelius Sullivan, ..	American, ..	Miner, ...	38	M.	Coal Brook, ...		Face, hands and body burned by blasting powder while preparing charge in cross-cut near face of chamber.
	18	Walter Kochas, ...	Polish, ...	Laborer, ...	28	M.	Olyphant, ...		A spark from his lamp ignited the powder.
	19	Joseph Scottloss, ...	Polish, ...	Miner, ...	31	M.	Coal Brook, ...		Compound fracture of leg by fall of roof at face of pillar while preparing to stand prop.
	27	Thomas F. Bird, ...	English, ...	Footman, ...	27	M.	Olyphant, ...		Ankle fractured by cross-timber falling on him while fixing it in place.
									Hand crushed by mine car at foot of shaft while he was blocking it.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Nov. 30	Alex. Sinco, ...	Russian, ...	Runner, ...	20	S.	Sterrick Creek,	Lackawanna,	Leg fractured by mine car while running it from chamber. He forgot to remove the headblock on the chamber track and the car struck the block and jumped off the track.
Dec. 19	John Orbin, ...	American, ..	Laborer, ...	32	M.	Powderly, ...		Leg fractured by fall of top coal at face of chamber while his miner was barring it down.
21	John Kennedy, ...	American, ..	Miner, ...	42	M.	Jermyn, ...		Leg fractured and body bruised by fall of roof at face of chamber while barring out loose coal.
27	Michael Hughes, ...	American, ..	Watchman, ...	60	S.	Olyphant, ...		Rib fractured by falling into locomotive pit. Outside.

CONDITION OF COLLIERIES

DELAWARE AND HUDSON COMPANY

Olyphant, Coal Brook, Powderly, Jermyn and Gravity Slope.—Ventilation, roads, drainage and condition as to safety, good.

TEMPLE COAL COMPANY

Sterrick Creek.—Ventilation, roads, drainage and condition as to safety, good.

SCRANTON COAL COMPANY

Raymond.—Ventilation, roads, drainage and condition as to safety, good.

Riverside.—Ventilation, roads, drainage and condition as to safety, fair.

HILLSIDE COAL AND IRON COMPANY

Erie.—Ventilation, roads, drainage and condition as to safety, fair.

ARCHBALD COAL COMPANY

Tappans.—Ventilation, roads, drainage and condition as to safety, fair.

HUMBERT COAL COMPANY

Sunnyside.—Ventilation, roads, drainage and condition as to safety, fair.

WEST MOUNTAIN COAL COMPANY

West Mountain.—Ventilation, roads, drainage and condition as to safety, good.

FALLBROOK COAL COMPANY

Murrins.—Ventilation, roads, drainage and condition as to safety, fair.

IMPROVEMENTS

DELAWARE AND HUDSON COMPANY

Olyphant Colliery.—Completed wash house, 110 feet long 20 feet wide, equipped with 24 shower baths and 224 lockers.

Installed new boiler plant on East side, comprising one battery of Sterling boilers to produce 540 H. P. for use in handling coal on the planes of the several veins in this vicinity.

Started to place one pair of 14 inch by 20 inch Florey type and one pair of 18 inch by 36 inch Dickson hoisting engines adjacent to new boiler plant, to handle coal on plane No. 14 New County vein and plane No. 3 in the Dunmore vein.

Finished rock plane 450 feet from the Clark vein to the New County vein. Drove rock plane 275 feet from New County to Fourteen Foot vein, east of No. 2 shaft, to facilitate handling coal from Fourteen Foot vein.

SCRANTON COAL COMPANY

Raymond Colliery.—Two Maxim water tube boilers, capacity 300 H. P. each are being installed. This work will be completed early in the year 1915.

SECOND DISTRICT

LACKAWANNA COUNTY

Scranton, Pa., February 26, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the Second Anthracite District, for the year ending December 31, 1914, as required by the Act of April 14, 1903.

Respectfully submitted,

L. M. EVANS, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	12
Number of mines,	25
Number of mines in operation,	25
Number of tons of coal shipped to market,	3,285,354
Number of tons used at mines for steam and heat,	383,105
Number of tons sold to local trade and used by employes,	96,893
Number of tons produced,	3,765,352
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	7,610
Number of persons employed outside,	1,723
Number of fatal accidents inside of mines,	24
Number of fatal accidents outside,	.....
Number of non-fatal accidents inside of mines,	65
Number of non-fatal accidents outside,	5
Number of tons of coal produced per fatal accident inside,	156,890
Number of tons produced per fatal accident outside,	.....
Number of tons produced per fatal accident inside and outside,	156,890
Number of persons employed per fatal accident inside,	317
Number of persons employed per fatal accident outside,	.....
Number of persons employed per fatal accident inside and outside,	389
Number of persons employed per non-fatal accident inside,	117
Number of persons employed per non-fatal accident outside,	345
Number of persons employed per non-fatal accident inside and outside,	133
Number of wives made widows,	14
Number of children made orphans,	23
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	15
Number of compressed air locomotives used inside,	38
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	45
Number of electric motors used outside,	.....
Number of gasoline locomotives used inside,	.....
Number of fans in use,	26
Number of furnaces in use,	.....
Number of gaseous mines in operation,	21
Number of non-gaseous mines in operation,	4
Number of new mines opened,	.....
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware and Hudson Company,	1,852,385
Delaware, Lackawanna and Western Railroad Company,	1,272,951
Scranton Coal Company,	530,296
Clearview Coal Company,	59,604
Bulls Head Coal Company,	50,116
Total,	3,765,352

Production by Counties

Lackawanna,	3,765,352

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Delaware and Hudson Co.,	12	.....	12	35	3	38	154,365	52,925	3,691	794	4,485	308	.....	105	265
Delaware, Lackawanna and Western Railroad Co.,	7	.....	7	13	2	15	181,850	97,919	2,607	505	3,112	373	.....	201	253
Scranton Coal Co.,	5	.....	5	15	.....	15	106,059	35,353	1,006	347	1,353	201	.....	67	.....
Bulls Head Coal Co.,	.....	.....	.....	2	.....	2	59,116	25,058	123	42	165	.....	.....	62	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	183	35	218	.....	.....	.....	.....
Totals and averages,	24	.....	24	65	5	70	156,890	57,928	7,610	1,723	9,333	317	.....	117	345

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of roof,	....	....	1	3	1	1	....	....	2	2	2	1	13	54.17
Mine cars,	1	...	...	1	....	1	1	...	....	....	....	....	4	16.66
Explosions of powder and dynamite,	....	....	1	....	....	....	....	...	....	....	....	....	1	4.17
Blasts, premature and otherwise,	1	....	1	....	....	....	....	1	1	....	....	2	6	25.00
Totals,	2	....	3	4	1	2	1	1	3	2	2	3	24	100.00
Outside (No Accidents)														

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	1	....	....	....	....	....	....	....	....	....	....	....	1	1.54
Falls of roof,	2	3	2	1	4	....	4	1	3	1	3	2	26	40.00
Mine cars,	3	...	....	4	3	1	....	1	4	....	3	6	25	38.46
Explosions of gas,	....	....	....	...	....	....	....	....	1	1	....	....	2	3.07
Blasts, premature and otherwise,	....	....	....	....	1	1	....	1	1	....	....	4	8	12.31
Machinery,	....	....	....	....	....	1	....	....	....	....	....	....	1	1.54
Struck by rope,	....	....	....	1	....	....	....	....	....	....	....	....	1	1.54
Struck by piece of coal,	....	....	....	....	....	....	1	....	....	....	....	....	1	1.54
Totals,	6	3	2	6	8	3	5	3	9	2	6	12	65	100.00
Outside														
Cars,	...	....	....	....	....	....	....	....	....	1	1	....	2	40.00
By mules,	...	1	....	....	....	....	....	....	....	....	....	....	1	20.00
Struck by pipe,	...	....	....	....	....	....	1	....	....	....	....	....	1	20.00
By falling,	...	....	....	....	....	....	....	....	....	....	1	....	1	20.00
Totals,	...	1	...	....	....	....	1	....	....	1	2	....	5	100.00
Grand totals inside and outside,	6	4	2	6	8	3	6	3	9	3	8	12	70	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	....	2	2	....	1	....	....	3	2	1	3	14
Miners' laborers,	....	....	1	1	....	....	....	1	....	....	1	....	4
Drivers and runners,	....	....	....	....	....	....	1	....	....	....	....	....	1
Doorboys and helpers,	1	....	....	....	....	....	....	....	....	....	....	....	1
Pumpmen,	....	....	....	....	1	....	....	....	....	....	....	....	1
Company men,	1	....	....	....	....	....	....	....	....	....	....	....	1
Brakemen,	....	....	....	1	....	1	....	....	....	....	....	....	2
Totals,	2	....	3	4	1	2	1	1	3	2	2	3	24
Outside (No Accidents)													

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2	2	2	...	5	1	3	3	3	....	2	4	27
Miners' laborers,	1	....	....	1	2	1	1	....	3	1	1	5	16
Drivers and runners,	1	....	....	4	....	1	....	....	2	....	2	2	12
Brakemen,	1	....	....	....	....	....	....	....	....	....	1	....	2
Motormen,	....	....	....	1	....	....	....	....	....	....	....	....	1
Company men,	1	1	....	....	....	....	....	....	1	1	....	1	5
Footmen,	....	....	....	....	1	....	1	....	....	....	....	....	2
Totals,	6	3	2	6	8	3	5	3	9	2	6	12	65
Outside													
Slatepickers (boys),	....	....	....	....	....	....	....	....	....	....	1	....	1
Drivers,	....	1	....	....	....	....	....	....	....	....	....	....	1
Machinists,	....	....	....	....	....	....	1	....	....	....	....	....	1
Loaders,	....	....	....	....	....	....	....	....	....	1	1	....	2
Totals,	....	1	....	....	....	....	1	....	....	1	2	....	5
Grand totals inside and outside,	6	4	2	6	8	3	6	3	9	3	8	12	70

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	....	1	1	1	1	....	....	....	....	....	4
English,	1	....	....	....	....	....	....	....	....	1	....	1	3
Irish,	....	....	....	....	....	1	....	....	....	....	1	1	3
Polish,	1	....	2	1	....	....	....	....	1	1	....	1	7
Slavonian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Lithuanian,	....	....	1	....	....	....	....	1	1	....	1	....	4
Russian,	....	....	....	1	....	....	....	....	1	....	....	....	2
Totals,	2	....	3	4	1	2	1	1	3	2	2	3	24

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	4	2	....	3	1	1	1	....	2	1	5	1	22
English,	....	....	....	....	....	1	1	....	....	....	....	1	3
Welsh,	....	....	....	....	....	....	....	....	1	....	....	....	1
Scotch,	....	....	....	....	....	....	1	....	....	....	....	....	1
Irish,	....	....	....	....	1	1	....	....	....	....	....	....	2
German,	....	....	....	....	....	....	1	....	....	....	....	....	1
Polish,	....	1	2	....	4	....	1	1	4	1	1	5	20
Italian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Slavonian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Lithuanian,	2	1	....	....	....	....	1	....	1	....	1	2	8
Russian,	....	....	....	1	2	....	....	2	1	1	1	3	11
Totals,	6	4	2	6	8	3	6	3	9	2	8	12	70

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Delaware and Hudson Co.															
Eddy Creek Colliery:															
Eddy Creek,	Shaft,	Gaseous,	Fan,	28	8	7.75	65	2.5	Guibal,	Steam,	8	193,350	186,140	208,390	119
New County,	Drift,	Non-gas.,	Fan,	8	3	2.12	168	1	Guibal,	Electricity,	1	17,220	12,950	20,820	30
Clark,	Drift,	Gaseous,	Fan,	10	3.3	2.5	180	1	Guibal,	Electricity,	2	41,947	26,136	47,640	82
Olyphant,	Shaft,	Gaseous,	2 Fans,	22	5	6.5	95	2.2	Guibal,	Steam,	8	147,763	120,984	176,238	320
				28	8	7.75	65	2.5	Guibal,	Steam,	3	51,696	43,055	60,966	120
No. 4,	Drift,	Non-gas.,	Fan,	10	2.5	2.5	125	2	Guibal,	Steam,	2	42,570	40,160	49,660	64
Dickson and Von Storch Colliery:															
Dickson,	Shaft,	Gaseous,	Fan,	20	5	7	75	1.6	Guibal,	Steam,	5	95,500	74,000	107,900	31
				20	5	7	85	1.9	Guibal,	Steam,	7	139,000	129,000	147,000	272
Von Storch,	Slope,	Gaseous,	Fan,	22	5.5	7	85	2.2	Guibal,	Steam,	6	95,890	80,850	105,310	260
Parker,	Shaft,	Gaseous,	Fan,	12	3	4	80	1	Guibal,	Steam,	3	27,700	23,900	30,400	70
Marvine Colliery:															
No. 2,	Shaft,	Gaseous,	Fan,	28	8	7.75	66	1.4	Guibal,	Steam,	4	144,300	135,000	151,500	187
14 Foot Vein,	Shaft,	Gaseous,	Fan,	20	5	7	66	1.4	Guibal,	Steam,	6	207,000	193,420	221,500	273
Clark,	Slope,	Gaseous,	Fan,	20	5	7	76	1.4	Guibal,	Steam,	3	87,900	82,000	92,900	85
Legitts Creek Colliery:															
No. 1,	Shaft,	Gaseous,	Fan,	20	5	6	80	2.5	Guibal,	Steam,	5	98,320	90,970	107,010	235
No. 2,				20	5	6	80	2.6			5	73,230	66,090	83,280	168
No. 3,				22	5.5	7	90	4			4	109,990	82,300	123,900	204

Delaware, Lackawanna and Western Railroad Co.															
Storrs Colliery:															
No. 1,	Shaft,	Gaseous,	Fan,	24	7.6	7.2	68	2.2	Guibal,	Steam,	10	191,195	145,045	219,295	427
No. 2,				15	7	4.5	91	1.5	Jeffrey,		10	175,319	141,954	191,697	380
No. 3,				24	8	6	68	1.5	Guibal,		10	159,752	131,714	187,448	406
Brisbin Colliery:															
Brisbin,	Shaft,	Gaseous,	Fan,	15	8.3	4.2	68	1.2	Jeffrey,	Steam,	8	193,230	121,220	209,230	380
Cayuga Colliery:															
Cayuga,	Shaft,	Gaseous,	Fan,	18	6	5.5	80	2.5	Guibal,	Steam,	10	179,950	156,440	189,090	396
Scranton Coal Co.															
Johnson Colliery:															
No. 1,	Shaft,	Gaseous,	Fan,	30	10	8	55	1.4	Guibal,	Steam,	10	224,220	169,400	229,500	328
No. 2,	Shaft,	Gaseous,	Fan,	18	5	4.8	100	1.6	Guibal,	Steam,	4	80,175	75,000	88,475	202
Richmond No. 3 Colliery:															
Richmond,	Shaft,	Gaseous,	Fan,	30	8	10	35	.9	Guibal,	Steam,	2	51,700	44,000	58,500	115
West Ridge Colliery:															
West Ridge,	Shaft,	Gaseous,	Fan,	20	5	5	75	1.8	Guibal,	Steam,	5	71,600	59,000	74,400	146
Clearview Coal Co.															
Clearview Colliery:															
Clearview,	Shaft,	Non-gas.,	*	.....	.....	.....	.....	.....	.....	.....	2	74,000	60,000	81,400	48
Bulls Head Coal Co.															
Bulls Head Colliery:															
Bulls Head,	Slope,	Non-gas.,	Fan,	8	2	4	100	1	Guibal,	Steam,	6	40,000	22,000	44,000	60

*Ventilated by fan at Von Storch.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Rail oad to Mine
Delaware and Hudson Co. Eddy Creek, Dickson and Von Storch, Marvine, Legitts Creek, Legitts Creek Washery, Marvine Washery, Von Storch Washery,	Lackawanna,	C. C. Rose,	Scranton,	E. R. Pettebone,	Dorranceton,	Delaware and Hudson
Delaware, Lackawanna and Western Railroad Co. Storrs, Brisbin, Cayuga, Brisbin Washery, Storrs Washery, Cayuga Washery,	Lackawanna,	C. E. Tobey,	Scranton,	Walter Reese,	Scranton,	D. L. and W.
Scranton Coal Co. Johnson, Richmond No. 3, West Ridge,	Lackawanna,	W. L. Allen,	Peckville,	Daniel Young, Inside, John J. Aitken, Outside, Daniel Young, Inside, John F. Cummings, Outside,	Scranton, Priceburg, Scranton, Scranton,	N. Y., O. and W.
Clearview Coal Co. Clearview,	Lackawanna,	F. P. Christian,	Scranton,	H. A. Dawson,	Scranton,	N. Y., O. and W.
Bulls Head Coal Co. Bulls Head,	Lackawanna,	David Spruks,	Scranton,	Jay Law,	Scranton,	N. Y., O. and W.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Delaware and Hudson Co.													
Eddy Creek,	Lackawanna,	569,600	4,151	8	573,759	266	1,394	4	10	697,825	8,080	.....	99
Dickson and Von Storch,		401,625	37,654	9,366	448,645	235	1,269	3	9	814,100	11,969	.....	128
Marvine,		324,057	35,642	4,979	364,678	268	948	2	9	507,850	69,307	.....	73
Legitts Creek,		273,566	19,894	13,223	306,673	263	874	3	10	523,052	34,167	.....	64
Washeries		1,568,838	97,341	27,576	1,693,755	.....	4,485	12	38	2,542,827	189,523	.....	364
Legitts Creek,	Lackawanna,	.....	80,129	.....	80,129	264	*	.....	.....	.....	.....	.....	.....
Marvine,		22,364	18,435	.....	40,799	100	*	.....	.....	.....	.....	.....	.....
Von Storch,		15,987	21,715	.....	37,702	42	*	.....	.....	.....	.....	.....	.....
Totals,		1,607,189	217,620	27,576	1,852,385	.....	4,485	12	38	2,542,827	189,523	.....	364
Delaware, Lackawanna and Western Railroad Co.													
Storrs,	Lackawanna,	715,137	44,946	6,170	766,253	260	1,831	5	10	868,475	73,680	.....	119
Brisbin,		193,764	18,397	4,699	216,860	248	660	1	1	258,800	16,938	.....	45
Cayuga,		187,404	18,530	7,496	213,430	254	561	1	4	159,250	131,194	.....	33
Washeries		1,096,305	81,873	18,365	1,196,543	.....	3,052	7	15	1,286,525	221,812	.....	197
Brisbin,	Lackawanna,	35,589	.....	.....	35,589	85	24	.....	.....	.....	.....	.....	.....
Storrs,		21,928	.....	.....	21,928	34	8	.....	.....	.....	.....	.....	.....
Cayuga,		18,891	.....	.....	18,891	150	28	.....	.....	.....	.....	.....	.....
Totals,		1,172,713	81,873	18,365	1,272,951	.....	3,112	7	15	1,286,525	221,812	.....	197

*Included with collieries.

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Scranton Coal Co.													
Johnson,	Lackawanna,	265,447	54,000	3,496	322,943	180	862	1	12	205,000	30,800	.....	108
Richmond No. 3,		108,496	18,290	3,637	130,423	186	238	3	3	55,000	3,200	.....	28
West Ridge,		65,579	9,500	1,851	76,930	177	253	1	.....	125,750	41,200	.....	25
Totals,	.....	439,522	81,790	8,984	530,296	.....	1,353	5	15	385,750	75,200	.....	161
Clearview Coal Co.													
Clearview,	Lackawanna, ...	32,000	22	27,582	59,604	296	218	.....	.....	41,050	27,206	68,256	3
Bulls Head Coal Co.													
Bulls Head,	Lackawanna, ...	33,930	1,800	14,386	50,116	285	165	.....	2	76,250	63,000	.....	28
Grand totals,	.....	3,285,354	383,105	96,893	3,765,352	.....	9,333	24	70	4,332,402	576,741	68,256	753

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Delaware and Hudson Co.,	Lackawanna,	.....	.....	61	13,850	13,850	4	38	6	182	11,550	15	25,000	11,350	3	14
Delaware, Lackawanna and Western Railroad Co.,		6	750	19	5,150	5,900	7	.....	34	45	6,831	7	11,171	5,066	5	.....
Scranton Coal Co.,		.....	.....	29	3,590	3,590	4	.....	3	51	10,226	15	9,895	6,626	5	1
Clearview Coal Co.,		*	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2	.....
Bulls Head Coal Co.,		.....	.....	1	200	200	.....	.....	.....	4	150	.....	.....	.....	.....	1
Totals,		6	750	110	22,790	23,540	15	38	45	282	28,757	37	46,066	23,042	15	16

*Power is purchased.

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Delaware and Hudson Co.,	Lackawanna,	7	6	34	1,092	1,222	602	69	24	512	123	3,691	....	7	51	136	61	174	8	357	794	4,485
Delaware, Lackawanna and Western Railroad Co.,		5	4	32	804	996	182	56	12	387	129	2,607	....	4	29	73	118	....	13	268	505	3,112
Scranton Coal Co.,		4	6	11	295	318	163	28	26	....	155	1,006	....	3	22	70	45	63	2	142	347	1,353
Clearview Coal Co.,		3	1	2	45	97	4	....	....	23	8	183	1	1	2	4	9	....	3	15	35	218
Bulls Head Coal Co.,		1	....	....	43	36	16	2	....	25	....	123	2	1	4	4	9	....	2	20	42	165
Totals,		20	17	79	2,279	2,669	967	155	62	947	415	7,610	3	16	108	287	242	237	28	802	1,723	9,333

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Delaware and Hudson Co.,	Lackawanna,	23	17	14	21	23	24	23	23	23	23	22	22	258
		14	17	14	20	23	24	23	24	24	25	23	23	254
Delaware, Lackawanna and Western Railroad Co.,		15	13	15	14	15	15	15	15	16	17	15	16	181
		27	24	25	24	25	26	23	24	24	26	23	25	296
Scranton Coal Co.,		26	24	25	23	13	25	25	18	25	26	24	25	285
Clearview Coal Co.,														
Bulls Head Coal Co.,														

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 10	Michael Zimber, ...	Polish,.....	Door-tender,	47	M.	1	....	Richmond No. 3,	Lackawanna,..	Killed by cars on gangway road. He notified the runner to run the car, but for some unknown reason he failed to open the door in time.
13	Robert Fidiam, ...	English, ...	Company-man,	68	S.	....	...	Dickson, ...		Killed by blast near face of chamber. He was closing a crosscut 120 feet from the face. It is supposed that a piece flew back along the rib and killed him. The miner gave the usual warning.
March 13	Michael Ripchack, ...	Lithuanian,	Miner, ...	35	M.	1	3	Eddy Creek, ...		Fatally injured by blast at face of chamber. He had three missfires and while returning to the fourth, the blast exploded.
	Joseph Crowback, ...	Polish,.....	Miner, ...	27	M.	1	2	Richmond No. 3,		Killed by fall of slant roof at face of chamber, while loading car.
27	Stanley Losezyneski,..	Polish,.....	Laborer, ...	30	S.	....	....	Legitts Creek, ..		Fatally burned by powder at box in chamber. The miner was testing a blasting barrel with a squib, which passed through the barrel and exploded an open keg of powder near the laborer.
April 2	John Farasa, ...	Slavonian,..	Miner, ...	57	M.	1	...	Storrs, ...		Killed by fall of bell roof at face of chamber, while drilling hole.
3	John Vasavage, ...	Russian, ...	Laborer, ...	35	M.	1	2	Richmond No. 3,		Killed by fall of roof at working face while drilling hole in it to blast it down.
6	Stanley Godack, ...	Polish,.....	Miner, ...	38	M.	1	1	Eddy Creek, ...		Killed by fall of bell roof at face of chamber, while drilling hole.
21	Leonard Harvey, ...	American,..	Brakeman, ..	20	S.	....	....	Storrs, ...		Killed by cars on gangway. He was bending to uncouple cars while they were in motion and fell between cars.
May 7	Frank O'Boyle, ...	American,..	Pumpman, ..	25	S.	....	....	Eddy Creek, ...		Killed by fall of slip roof on gangway while walking along road.
June 9	Michael Cusick, ...	Irish, ...	Miner, ...	48	M.	1	4	Marvine, ...		Fatally injured by fall of roof at face of chamber while replacing discharged prop.

June	22	Thomas Hartshorn, ..	American, ..	Brakeman, ..	20	S.	....	....	Storrs, ...	Lackawanna, ..	Fatally injured by cars on gangway road. He was riding on a motor and his leg caught in a close prop in passing, and he was thrown under the motor.
July	13	Thomas Foy, ...	American, ..	Runner, ...	19	S.	....	....	Cayuga, ...		Fatally injured by cars on gangway road. He was coupling cars in motion and fell under them.
Aug.	11	Anthony Savage, ...	Lithuanian,	Laborer, ...	35	S.	....	....	West Ridge, ...		Fatally injured by blast at face of chamber. He was firing a blast after the miner had gone home. After waiting some time he thought the squib had missed, and just as he returned to examine the blast went off.
Sept.	2	Michael Zenoskavage,.	Lithuanian,	Miner, ...	53	M.	1	3	Dickson, ...		Fatally injured by fall of roof at face of chamber while examining after blast.
	4	John Janzweski, ...	Russian, ...	Miner, ...	49	S.	....	....	Storrs, ...		Killed by blast at face of chamber. His laborer, who was also seriously injured, testified that as soon as the squib was ignited, the charge exploded. The squib is supposed to have been defective.
	24	Felix Wincavage, ...	Polish,.....	Miner, ...	40	S.	....	....	Legitts Creek, ..		Fatally injured by fall of slip roof at face of chamber while replacing discharged prop.
Oct.	3	Chas. Noveleski, ...	Polish,.....	Miner, ...	30	M.	1	....	Brisbin, ...		Fatally injured by fall of roof at face of chamber while examining after a blast.
	13	Stephen Jayne, ...	English, ...	Miner, ...	56	M.	1	2	Eddy Creek, ...		Fatally injured by fall of roof at face of chamber while replacing discharged prop.
Nov.	18	Michael Buckshanski,.	Lithuanian,	Laborer, ...	22	S.	....	....	Marvine, ...		Killed by fall of bell roof at face of chamber while shoveling coal to the car.
	28	Phillip Malia, ...	Irish, ...	Miner, ...	52	M.	1	1	Dickson, ...		Fatally injured by fall of roof at face of chamber while standing prop under it.
Dec.	2	Thomas Holmes, ...	Irish, ...	Miner, ...	51	M.	1	....	Storrs, ...		Fatally injured by blast at face of chamber while lighting the squib.
	17	James White, ...	English, ...	Miner, ...	50	M.	1	4	Legitts Creek, ..		Killed by blast at face of chamber while lighting the squib.
	24	Julian Zapolski, ...	Polish,.....	Miner, ...	31	M.	1	1	Johnson, ...		Fatally injured by fall of bell roof at face of chamber while shoveling coal.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	James E. Pollard, ..	American, ..	Company man, ...	43	M.	Marvine, ...	Lackawanna,	Back injured by cars at foot of slope. A car became derailed when passing him.
7	Joseph Petrofski, ...	Lithuanian,	Miner, ...	28	M.	Richmond No. 3, ...		Leg fractured by fall of coal near face of chamber while loading car.
8	Frank Smith, ...	Lithuanian,	Laborer, ...	21	S.	Legitts Creek, ...		Leg fractured by fall of roof at face of chamber while loading rock under it.
13	Joseph Stead, ...	American, ..	Runner, ...	19	S.	Storrs, ...		Chest injured by cars at face of chamber. Car was derailed.
19	Benjamin Lewis, ...	American, ..	Miner, ...	37	M.	Legitts Creek, ...		Collar bone fractured by fall of roof at face of chamber.
23	James A. Moran, ...	American, ..	Brakeman, ...	25	M.	Dickson, ...		Leg fractured by cars in chamber. Car was derailed.
Feb. 7	Jacob Minchick, ...	Polish,.....	Miner, ...	33	M.	Marvine, ...		Chest and hips contused by fall of roof at face of chamber while standing prop under it.
16	Michael Caffe ty, ...	American, ..	Company man, ...	27	M.	Legitts Creek, ...		Face and legs contused by fall of roof near face of chamber while removing brattice plank.
21	Anthony Zummie, ...	Lithuanian,	Miner, ...	49	M.	Richmond No. 3, ...		Rib fractured by fall of roof at face of chamber while examining after blast.
	Carl Robinson, ...	American, ..	Driver, ...	18	S.	Eddy Creek, ...		Face lacerated by kick from mule. He was taking a mule to outside barn.
March 20	Julius Rozar, ...	Polish,.....	Miner, ...	23	M.	Johnson, ...		Hip contused by fall of roof at face of chamber.
30	Charles Snyder, ...	Polish,.....	Miner, ...	35	M.	Richmond No. 3, ...		Legs fractured by fall of slant roof at face of chamber .
April 6	Michael Kalofut, .. .	Slavonian, ..	Driver, ...	16	S.	Johnson, ...		Leg fractured by slope haulage rope. The rope pulled over a pulley on a curve and caught his leg.
	John T. Boston, ...	American, ..	Runner, ...	17	S.	Legitts Creek, ...		Leg fractured by cars on gangway road. Car became derailed.
16	Thomas Harris, ...	American, ..	Motorman, ...	20	S.	Marvine, ...		Leg fractured while riding on cars on gangway road.
	Timothy Cavanaugh,	American, ..	Runner, ...	22	S.	Marvine, ...		Arm fractured by cars on gangway. He was riding on motor and fell off.

April	23	Michael Zeletinie, ...	Russian, ...	Laborer, ...	34	M.	Eddy Creek, ...		Leg fractured by fall of roof near face of chamber while sawing prop on the road.
	27	Anthony Carnotta, ..	Italian, ...	Runner, ...	18	S.	Eddy Creek, ...		Leg fractured by cars on chamber road. Car bumped the head-block.
May	12	Alex Barneck, ...	Russian, ...	Miner, ...	30	S.	Dickson, ...		Leg fractured by fall of roof at face of chamber while mining out blast.
	16	Anthony Cobinski, ...	Polish,.....	Laborer, ...	44	M.	Eddy Creek, ...		Rib fractured by cars on chamber road while running car to head-block.
	18	Dominic Lepper, ...	American, ..	Footman, ...	23	M.	Dickson, ...		Internally injured on cage in shaft while lifting derailed car.
	19	Martin Barthold, ...	Polish,.....	Miner, ...	48	M.	Johnson, ...		Leg fractured by fall of roof at face of chamber while taking it down.
		John Pross, ...	Russian, ...	Miner, ...	27	M.	Dickson, ...		Leg fractured by blast at face of chamber.
	20	Michael Bowder, ...	Polish,.....	Miner, ...	48	M.	Eddy Creek, ...		Leg fractured by cars on chamber road while running car to head-block.
	21	Patrick Dickson, ...	Irish, ...	Miner, ...	56	M.	Marvine, ...		Rib fractured by fall of roof at face of chamber while examining after blast.
	22	Zegmond Moslefski, ..	Polish,.....	Laborer, ...	42	M.	Eddy Creek, ...		Leg fractured by fall of roof at face of chamber while examining after blast.
	13	William Proudlock, ..	English, ...	Laborer, ...	39	W.	Johnson, ...		Two toes amputated by machinery in slope engine house while lacing his shoes on the bed plate.
		David J. Hughes, ...	American, ..	Driver, ...	17	S.	Eddy Creek, ...		Leg fractured by cars at foot of plane while crossing between moving cars.
	29	Peter Gaffney, ...	Irish, ...	Miner, ...	60	M.	Storrs, ...	Lackawanna,	Collar bone and rib fractured by blast near face of chamber. While running away from blast, he ran into car.
July	7	Charles Bushella, ...	German, ...	Miner, ...	34	M.	Marvine, ...		Leg fractured by fall of slip roof at face of chamber.
	17	Thomas Green, ...	Scotch, ...	Machinist, ...	23	M.	Marvine, ...		Ruptured while lifting a pipe on a scaffold at boiler house. Outside.
	20	Joseph Ignatovich, ..	Lithuanian,	Laborer, ...	29	S.	Legitts Creek, ...		Hip dislocated by fall of slip roof at face of chamber.
		Edward Conroy, ...	English, ...	Miner, ...	36	M.	Eddy Creek, ...		Arm fractured by fall of slip roof at face of chamber.
	21	Patrick Gerrity, ...	American, ..	Footman, ...	26	M.	Cayuga, ...		Skull fractured by a piece of coal falling from tipple while he was footing car.
	27	Adam Moronko, ...	Polish,.....	Miner, ...	45	M.	Storrs, ...		Back injured by fall of roof at face of chamber while driving cap piece under it.
Aug.	1	Frank Kezmowski, ..	Russian, ...	Miner, ...	50	M.	Storrs, ...		Arms and back lacerated by blasting near face of chamber.
	5	Joseph Tanefski, ...	Polish,.....	Miner, ...	27	M.	Johnson, ...		Spine injured by fall of slip roof at face of chamber.
	13	Andrew Shayco, ...	Russian, ...	Miner, ...	35	M.	Dickson, ...		Leg fractured by cars at face of chamber. His light went out and he fell under motor.
Sept.	4	Stanley Shurcofski, ..	Russian, ...	Laborer, ...	28	M.	Storrs, ...		Seriously injured by blast near face of chamber. Charge exploded while miner was lighting squib.
		Charles Reilly, ...	American, ..	Company man, ...	52	S.	Legitts Creek, ...		Leg fractured by cars on gangway road.

TABLE 5—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Sept. 12	Charles Unonus, ...	Lithuanian,	Laborer, ...	22	S.	Von Storch, ...		Leg fractured by fall of roof at face of chamber after firing blast.
18	James T. Williams, ..	Welsh, ...	Miner, ...	56	M.	Legitts Creek, ...		Three fingers amputated by fall of roof at face of chamber while standing prop.
	Allen Webb, ...	American, ..	Driver, ...	18	S.	Storrs, ...		Leg fractured by cars on gangway road. The mule was unhitched and car ran over head block.
22	John Sąbkowski, ...	Polish, ...	Miner, ...	42	M.	Johnson, ...		Head and body burned by explosion of gas at face of chamber. He blocked air course with coal and gas accumulated.
24	Frank Melinski, ...	Polish, ...	Miner, ...	30	M.	Johnson, ...		Spine fractured by fall of roof at face of chamber while mining out blast.
28	Alex Galovka, ...	Polish, ...	Laborer, ...	25	M.	Marvine, ...		Leg fractured by cars on gangway road while running car to head-block.
30	Zigmond Grove, ...	Polish, ...	Runner, ...	22	S.	Johnson, ...		Leg fractured by cars on gangway road while riding between them.
Oct. 1	John Hazel, ...	Polish, ...	Laborer, ...	21	M.	Johnson, ...	Lackawanna,	Body and arms burned by explosion of gas. A canvas had been left open, and he went back to close it. When he returned to work, the air drove the gas to his light.
14	John Hartman, ...	Russian, ...	Loader, ...	38	S.	Cayuga, ...		Arm fractured by railroad cars. He slipped and fell into car. Outside.
27	Samuel Coleman, ...	American, ..	Company man, ...	33	M.	Von Storch, ...		Ankle fractured by fall of roof on gangway road while barring it down.
Nov. 6	Adolph Terry, ...	Russian, ...	Miner, ...	24	M.	Legitts Creek, ...		Ribs fractured by fall of roof at face of chamber while standing prop under it.
12	Joseph Kemp, ...	Polish, ...	Miner, ...	28	S.	Eddy Creek, ...		Collar bone fractured by fall of roof at face of chamber while watching miner take roof down.
14	Peter Schultz, ...	Lithuanian,	Laborer, ...	22	M.	Storrs, ...		Hips injured by fall of roof at face of chamber.
	John Haggerty, ...	American, ..	Brakeman, ...	20	S.	Cayuga, ...		Back and side contused by cars on gangway road. A door closed against him while riding through on motor.

Nov.	14	Samuel Williamson, ..	American, ..	Loader, ...	38	M.	Cayuga, ...		Three ribs fracturer by railroad cars. He slipped and fell on the hopper rod. Outside.
	20	Joseph Gariski, ...	American, ..	Runner, ...	18	S.	Dickson, ...		Leg fractured by cars on gangway road while running car to head-block.
	21	William Epply, ...	American, ..	Slatepicker, ...	14	S.	Eddy Creek, ...		Arm broken by falling from a ladder while playing around the breaker. Outside.
	24	John T. Boston, ...	American, ..	Runner, ...	18	S.	Legitts Creek, ...		Toes amputated by cars at foot of plane. The cars became uncoupled and ran away.
Dec.	1	Robert Marshal, ...	American, ..	Runner, ...	24	S.	Dickson, ...		Hip fractured by derailed cars on gangway road.
		Andrew Vitshatis, ..	Lithuanian,	Laborer, ...	30	S.	Bulls Head, ...		Leg fractured by cars on gangway road. He was pushing a car into the chamber and was caught by a runaway car.
	2	Peter Kelly, ...	Russian, ...	Miner, ...	35	M.	Legitts Creek, ...		Body and limbs contused by fall of roof at face of chamber while drilling hole under it.
		Michael Duchinis, ...	Lithuanian,	Laborer, ...	55	S.	Bulls Head, ...	Lackawanna, ..	Leg fractured by cars in face of chamber. The miner removed the block while the laborer was crossing the track.
	15	John Bedrize, ...	Polish, ...	Laborer, ...	49	M.	Johnson, ...		Arm and leg bruised by blast at face of chamber.
	16	Adam Kilvonski, ...	Polish, ...	Miner, ...	26	M.	Storrs, ...		Back injured by fall of roof at face of chamber while replacing discharged prop.
	17	William Murton, ...	English, ...	Company man, ...	55	W.	Johnson, ...		Foot injured by cars on gangway road while putting on a derailed car.
	18	Zigmond Grove, ...	Russian, ...	Runner, ...	22	S.	Johnson, ...		Hand lacerated by cars on gangway road while snubbing the wheel.
	21	Anthony Zycofski, ..	Polish, ...	Miner, ...	36	M.	Storrs, ...		The miner's arms were fractured and laborer's collar bone was fractured by blast near face of chamber. The blast went off as soon as the squib was lighted.
		Benjamin Zycofski,	Polish, ...	Laborer, ...	19	S.			
	22	Adam Shelo, ...	Polish, ...	Miner, ...	36	M.	Brisbin, ...		Leg fractured by cars on gangway road.
	30	George Volosick, ...	Russian, ...	Laborer, ...	24	S.	Marvine, ...		Leg fractured by blast 150 feet from face of chamber. He did not get far enough out of the way of the blast.

CONDITION OF COLLIERIES

DELAWARE AND HUDSON COMPANY

Eddy Creek, Dickson and VonStorch and Marvine.—Ventilation, drainage and condition as to safety, good.

Legitts Creek.—Ventilation and drainage good. Condition as to safety, fair.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Storrs, Brisbin and Cayuga.—Ventilation, drainage, and condition as to safety, good.

SCRANTON COAL COMPANY

Johnson and Richmond.—Ventilation, drainage, and condition as to safety, good.

West Ridge.—Ventilation and drainage fair. Condition as to safety, good.

CLEARVIEW COAL COMPANY

Clearview.—Ventilation and drainage fair. Condition as to safety, good.

BULLS HEAD COAL COMPANY

Bulls Head.—Ventilation, drainage, and condition as to safety, good.

IMPROVEMENTS

DELAWARE AND HUDSON COMPANY

Eddy Creek Colliery.—Installed 300 K. W. motor generator set, at head of shaft to supply direct current to electric locomotives in Eddy Creek and Olyphant shafts. Installed one 7-ton gathering electric locomotive in each of the following veins: Diamond, Clark and Dunmore No. 4. Built concrete barn in Clark vein. Started rock tunnel in Olyphant shaft to drive through "Smoketown fault" in Rock vein, to concentrate transportation of coal in this vein. Built 600 feet of 15 inch concrete wall between airway and manway compartments of second opening at No. 12 slope. Concreted, (replacing timber) "Dugans" manway connecting with Olyphant shaft, Miles slope and Grassy Island workings. Installed two 10-ton electric locomotives in Rock vein to replace three air locomotives. Laid 4,350 feet of 10 inch cast pipe from Olyphant breaker to borehole in "Smoketown," through which slug from Washery annex is pumped for distribution through two 6 inch lines inside. Installed 110 H. P. alternating current electric hoist at Birdseye on No. 4 slope in Clark vein, replacing 55 H. P. hoist. Installed one 17-foot frame Guibal type fan on Clark vein drift, replacing one 10-foot and one 8-foot fan at Birdseye. Drove rock tunnel at Birdseye 250 feet, and second opening for same 50 feet from Clark to New County vein off No. 4 slope.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Storrs Colliery.—Installed the following: Conveyor for handling rock from breaker; four 1,000 gallon centrifugal pumps, and one track pump; electric hoist at the Clark vein. At No. 2 shaft; one 7-ton electric locomotive with reel attachment; also one 10 by 10 compressor with drills in the Dunmore vein.

SCRANTON COAL COMPANY

Johnson Colliery.—Installed 2 Maxim water tube boilers, normal rated capacity 300 H. P., also 2 improved locomotive type boilers, rated capacity 175 H. P. each.

Richmond No. 3 Colliery.—Installed one 10 by 20 by 36-inch duplex pattern pump, rated capacity 800 gallons per minute.

THIRD DISTRICT

LACKAWANNA COUNTY

Scranton, Pa., February 13, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the Third Anthracite District for the year ending December 31, 1914, as required by the Act of April 14, 1903.

Respectfully submitted,

S. J. PHILLIPS, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	13
Number of mines,	24
Number of mines in operation,	24
Number of tons of coal shipped to market,	2,907,477
Number of tons used at mines for steam and heat,	266,016
Number of tons sold to local trade and used by employes,	73,343
Number of tons produced,	3,246,836
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	73,550
Number of persons employed inside of mines,	5,919
Number of persons employed outside,	1,691
Number of fatal accidents inside of mines,	28
Number of fatal accidents outside,	1
Number of non-fatal accidents inside of mines,	40
Number of non-fatal accidents outside,	4
Number of tons of coal produced per fatal accident inside,	115,958
Number of tons produced per fatal accident outside,	3,246,836
Number of tons produced per fatal accident inside and outside,	111,960
Number of persons employed per fatal accident inside,	211
Number of persons employed per fatal accident outside,	1,691
Number of persons employed per fatal accident inside and outside,	262
Number of persons employed per non-fatal accident inside,	148
Number of persons employed per non-fatal accident outside,	423
Number of persons employed per non-fatal accident inside and outside,	173
Number of wives made widows,	20
Number of children made orphans,	54
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	16
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	45
Number of electric motors used outside,	4
Number of gasoline locomotives used inside,	.....
Number of fans in use,	20
Number of furnaces in use,	1
Number of gaseous mines in operation,	10
Number of non-gaseous mines in operation,	14
Number of new mines opened,	1
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Pennsylvania Coal Company,	1,044,007
Scranton Coal Company,	635,882
Delaware, Lackawanna and Western Railroad Company,	560,223
Price-Pancoast Coal Company,	557,439
Economy Light, Heat and Power Company,	102,419
Green Ridge Coal Company,	86,326
Nay Aug Coal Company,	74,903
Hudson Coal Company,	73,138
Spencer Coal Company,	68,193
Carney and Brown Coal Company,	37,800
No. 6 Coal Company,	6,506
Total,	3,246,836

Production by Counties

Lackawanna,	3,246,836

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Pennsylvania Coal Co.,	5	.....	5	5	1	6	208,801	208,801	1,742	667	2,409	348	.....	348	667
Scranton Coal Co.,	4	.....	4	13	3	16	158,971	48,914	1,133	282	1,415	283	.....	87	94
Delaware, Lackawanna and Western Railroad Co.,	15	1	16	4	.....	4	37,348	140,056	1,346	295	1,641	90	295	337	.....
Price-Pancoast Coal Co.,	3	.....	3	10	.....	10	185,813	55,744	1,165	235	1,400	388	.....	117	.....
Green Ridge Coal Co.,	.....	.....	.....	1	.....	1	.....	86,326	124	65	189	.....	.....	124	.....
Nay Aug Coal Co.,	.....	.....	.....	4	.....	4	.....	18,726	178	36	214	.....	.....	45	.....
Hudson Coal Co.,	1	.....	1	1	.....	1	73,138	73,138	*	.....	.....	306	.....	306	.....
Spencer Coal Co.,	.....	.....	.....	1	.....	1	.....	68,193	144	53	197	.....	.....	144	.....
No. 6 Coal Co.,	.....	.....	.....	1	.....	1	.....	6,506	19	11	30	.....	.....	19	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	68	47	115	.....	.....	.....	.....
Totals and averages,	28	1	29	40	4	44	115,958	81,171	5,919	1,691	7,610	211	1,691	148	423

*Employes included with D. L. and W. R. R. Co.

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of roof,	....	2	....	....	....	....	1	1	....	1	....	1	6	21.43
Mine cars,	....	....	....	....	....	....	....	1	....	1	....	....	2	7.14
Explosions of powder and dynamite,	....	....	....	....	....	....	....	....	1	....	....	....	1	3.57
Blasts, premature and otherwise,	2	....	....	....	1	....	....	....	....	1	....	....	4	14.29
Falling into shafts,	....	1	....	....	1	....	....	....	....	....	....	13	15	53.57
Totals,	2	3	....	....	2	....	1	2	1	3	....	14	28	100.00
Outside														
Cars,	1	....	....	....	....	....	....	....	....	....	....	....	1	100.00
Totals,	1	....	....	....	....	....	....	....	....	....	....	....	1	100.00
Grand totals inside and outside,	3	3	....	....	2	....	1	2	1	3	....	14	29	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	....	....	....	....	....	....	....	1	....	1	2.50
Falls of roof,	....	2	....	....	1	2	....	2	....	2	1	2	12	30.00
Mine cars,	....	3	2	1	1	1	....	2	1	1	....	1	13	32.50
Explosions of powder and dynamite,	....	....	....	....	....	3	....	....	....	2	....	....	5	12.50
Blasts, premature and otherwise,	....	....	....	3	1	....	....	1	1	1	1	....	8	20.00
Mules,	....	....	....	....	....	....	....	1	....	....	....	....	1	2.50
Totals,	....	5	2	4	3	6	....	6	2	6	3	3	40	100.00
Outside														
Machinery,	1	....	....	....	....	....	....	....	....	....	....	1	2	50.00
By falling,	....	....	1	....	....	....	....	....	....	....	....	....	1	25.00
Struck by timber,	....	....	....	....	....	....	....	....	....	1	....	....	1	25.00
Totals,	1	....	1	....	....	....	....	....	....	1	....	1	4	100.00
Grand totals inside and outside,	1	5	3	4	3	6	....	6	2	7	3	4	44	.....

10—21—1915

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	....	....	....	2	....	1	1	1	1	....	8	14
Miners' laborers,	....	2	....	....	....	....	....	....	....	1	....	5	8
Doorboys and helpers,	....	....	....	....	....	....	....	....	....	....	....	1	1
Shaftmen,	....	1	....	....	....	....	....	....	....	....	....	....	1
Company men,	....	....	....	....	....	....	....	1	....	....	....	....	1
Muckers,	2	....	....	....	....	....	....	....	....	....	....	....	2
Wheelmen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	2	3	....	....	2	....	1	2	1	3	....	14	28
Outside													
Helpers,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	1	....	....	....	....	....	....	....	....	....	....	....	1
Grand totals inside and outside,	3	3	....	....	2	....	1	2	1	3	....	14	29

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	3	1	....	1	3	....	2	1	4	2	3	20
Miners' laborers,	....	....	1	3	1	2	....	1	....	1	1	....	10
Drivers and runners,	....	2	....	....	....	1	....	3	....	1	....	....	7
Doormen and helpers,	....	....	....	1	....	....	....	....	....	....	....	....	1
Company men,	....	....	....	....	1	....	....	....	....	....	....	....	1
Footmen,	....	....	....	....	....	....	....	....	1	....	....	....	1
Totals,	....	5	2	4	3	6	....	6	2	6	3	3	40
Outside													
Blacksmiths and carpenters,	....	....	1	....	....	....	....	....	....	....	....	....	1
Slatepickers (boys),	1	....	....	....	....	....	....	....	....	....	....	1	2
Laborers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	1	....	1	....	....	....	....	....	....	1	....	1	4
Grand totals inside and outside,	1	5	3	4	3	6	....	6	2	7	3	4	44

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	....	....	....	....	....	....	....	....	....	....	....	1
English,	....	....	....	....	....	....	....	1	....	1	....	....	2
Welsh,	....	....	....	....	....	....	....	....	....	....	....	1	1
Irish,	....	....	....	....	....	....	....	1	....	1	....	....	2
German,	2	....	....	....	....	....	....	....	....	....	....	....	2
Polish,	....	....	....	....	1	....	....	....	....	....	....	11	12
Hungarian,	....	....	....	....	1	....	....	....	1	....	....	....	2
Slavonian,	....	1	....	....	....	....	....	....	....	....	....	1	2
Lithuanian,	....	....	....	....	....	....	1	....	....	....	....	1	2
Russian,	....	1	....	....	....	....	....	....	....	....	....	....	1
Greek,	....	1	....	....	....	....	....	....	....	....	....	....	1
Magyar,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	3	3	....	....	2	....	1	2	1	3	....	14	29

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	1	1	1	....	....	....	2	....	....	....	....	5
Irish,	....	....	....	....	1	....	....	1	1	....	1	1	5
German,	....	....	1	1	....	....	....	1	....	....	....	....	3
Polish,	....	2	....	2	1	1	....	2	....	3	....	2	12
Hungarian,	....	....	....	....	....	....	....	....	....	1	....	....	1
Italian,	....	....	1	....	1	2	....	....	....	1	....	....	5
Slavonian,	....	....	....	....	....	1	....	....	....	1	1	1	4
Lithuanian,	1	....	....	....	....	2	....	....	1	....	....	....	4
Austrian,	....	1	....	....	....	....	....	....	....	1	1	....	3
Russian,	....	1	....	1	....	....	....	....	....	....	....	....	2
Totals,	1	5	3	4	3	6	....	6	2	7	3	4	44

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Pennsylvania Coal Co.																
Pennsylvania No. 1 Colliery:																
Pennsylvania No. 1, ...	Shaft,.....	Gaseous, ..	Fan, ...	17.8	5.0	5.3	74	1.5	Guibal, ..	Steam,.....	..	12	123,260	107,420	123,390	303
Gipsy Grove, ...	Shaft,.....	Non-gas., .	Fan, ...	20.0	6.6	5.5	70	0.9	Guibal, ..	Steam,.....	..	2	19,000	17,500	19,900	46
Pennsylvania No. 2, ...	Drift, ...	Non-gas., .	Fan, ...	17.8	5.0	5.3	70	1.0	Guibal, ..	Steam,.....	..	7	92,800	73,800	101,800	235
Clark, ...	Slope, ...	Non-gas., .	Fan, ...	17.8	5.0	5.3	45	0.5	Guibal, ..	Steam,.....	..	2	18,500	17,800	19,200	58
Marcy, ...	Slope, ...	Non-gas., .	Fan, ...	7.9	1.5	2.8	230	1.3	Propelling	Electricity,.	..	3	26,600	25,000	27,700	70
Pennsylvania No. 5 Colliery:																
Pennsylvania No. 5, ...	Shaft,.....	Gaseous, ..	2 Fans, ...	20.0 17.8	6.6 5.0	5.5 5.3	60 75	0.4 1.5	Guibal, .. Guibal, ..	Steam,..... Electricity,.	..	9	92,000	67,300	108,700	225
Underwood Colliery:*																
Underwood, ...	Shaft,.....	Non-gas., .	2 Fans, ...	14.0 14.0	6.0 6.0	4.6 4.6	50 50	0.4 0.4	Jeffrey, ..	Steam,.....	..	3	38,100	34,400	38,400	112
Scranton Coal Co.																
Pine Brook Colliery:																
Pine Brook, ...	Shaft,.....	Gaseous, ..	Fan, ...	17.6	5.0	6.0	102	1.2	Guibal, ..	Steam,.....	..	13	205,250	190,000	250,000	803
Mount Pleasant Colliery:																
Mount Pleasant, Main, ..	Shaft,.....	Gaseous, ..	Fan, ...	20.0	5.6	6.9	60	0.7	Guibal, ..	Steam,.....	..	7	103,400	100,000	170,000	337
Mount Pleasant, Surface,	Shaft,.....	Gaseous, ..	Fan, ...	12.0	3.2	3.5	80	0.6	Guibal, ..	Steam,.....	..	7	85,500	81,000	148,200	

*New colliery.

Delaware, Lackawanna and Western Railroad Co.																
Diamond Colliery:																
Diamond No. 2, ...	Shaft,.....	Gaseous, ..	Fan, ...	14.0	4.0	4.0	92	1.5	Open, ...	Steam,.....	.	8	122,125	109,362	154,632	375
Diamond Tripp, ...	Shaft,.....	Gaseous, ..	Fan, ...	15.6	7.0	1.6 3.0 4.0	82	1.5	Jeffrey, ..	Steam,.....	..	6	147,160	134,830	157,470	422
Diamond Tripp, ...	Slope, ...	Non-gas., .	Fan, ...	16.0	6.0	4.0	96	0.9	Guibal, ..	Steam,.....		3	69,200	28,680	70,000	46
Diamond, ...	Drift, ...	Non-gas., .										3	52,600	47,530	57,360	206
Manville Colliery:																
Manville, ...	Shaft,.....	Gaseous, ..	Fan, ...	20.0	5.0	5.0	68	0.8	Guibal, ..	Steam,.....	..	6	175,950	159,730	181,980	306
Price-Pancoast Coal Co.																
Pancoast Colliery:																
Pancoast, ...	Shaft,.....	Gaseous, .	3 Fans, ...	20.0	6.0	5.0	70	1.2	Guibal, ..	Steam,.....		27	388,581	355,109	435,382	1,165
				20.0	6.0	5.0	90	2.5	Guibal, ..	Steam,.....						
				20.0	6.0	5.0	98	4.1	Jeffrey, ..	Steam,.....						
Green Ridge Coal Co.																
Green Ridge Colliery:																
Green Ridge, ...	Slope	Gaseous, ..	Fan, ...	16.0	5.0	4.6	48	2.5	Guibal, ..	Steam,.....	..	8	90,540	71,720	108,750	120
Nay Aug Coal Co.																
Nay Aug Colliery:																
Nay Aug No. 1, ...	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	....	.....	..	1	26,700	26,100	28,100	62
Nay Aug, ...	Drift, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.. ..	.....	..	1	24,100	23,300	24,900	59
Nay Aug No. 3, ...	Drift, ...	Non-gas., .	Natural, ..	.....	.....	...	.....	.....	....	.....	..	1	21,000	17,900	21,900	43
Spencer Coal Co.																
Spencer Colliery:																
Spencer No. 1, ...	Shaft,.....	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	....	.....	..	5	30,400	25,000	36,900	94
Spencer No. 2, ...	Shaft,.....	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	3	15,100	11,300	19,200	50
Carney and Brown Coal Co.																
Carney and Brown Colliery:																
Carney and Brown, ...	Slope, . .	Non-gas., .	Furnace,..	.....	.....	.....	.....	.....	....	.....	32	1	13,323	13,482	13,482	68
No. 6 Coal Co.																
No. 6 Colliery:																
No. 6, ...	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	1	6,000	6,200	6,400	19

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Pennsylvania Coal Co. Pennsylvania Nos. 1 and 5, Underwood,	Lackawanna, ..	Joseph P. Jennings,..	Scranton, ...	Jesse Palmer, ...	Dunmore, ...	Erie
Scranton Coal Co. Pine Brook, ... Mount Pleasant, ...	Lackawanna, ..	W. L. Allen, General Manager.	Peckville, ...	Daniel Young, Inside, J. F. Cummings, Outside.	Scranton, ...	O. and W.
Delaware, Lackawanna and Western Railroad Co. Diamond, ... Manville, ... Diamond Washery, ...	Lackawanna, ..	C. E. Tobey, ...	Scranton, ...	Walter Reese, ... George J. Wethers, ..	Scranton, ... Scranton, ...	D. L. and W. D. and H. D. L. and W.
Price-Pancoast Coal Co. Pancoast, ...	Lackawanna, ..	John R. Bryden, General Manager.	Scranton, ...	J. V. Birtley, ...	Throop, ...	O. and W., D. L. and W., D. and H.
Economy Light, Heat and Power Co. Economy Washery, ...	Lackawanna, ..	John A. Fritz, ...	Scranton, ...	John A. Fritz, ...	Scranton, ...	D. and H.
Green Ridge Coal Co. Green Ridge, ...	Lackawanna, ..	W. L. Connell, ...	Scranton, ...	W. L. Connell, ...	Scranton, ...	Erie, and D. and H.
Nay Aug Coal Co. Nay Aug, ...	Lackawanna, ..	E. H. Leaning, ...	Scranton, ...	John A. Hines, ...	Scranton, ...	Erie
Hudson Coal Co. Manville, ...	Lackawanna, ..	C. C. Rose, ...	Scranton, ...	E. R. Pettebone, ...	Dorranceton, ...	D. and H.
Spencer Coal Co. Spencer, ...	Lackawanna, ..	A. J. McHale, ...	Dunmore, ...	A. J. McHale, ...	Dunmore, ...	Erie
Carney and Brown Coal Co. Carney and Brown, ...	Lackawanna, ..	John Carney, ...	Dunmore, ...	John J. Brown, ...	Dunmore, ...	D. L. and W.
No. 6 Coal Co. No. 6, ...	Lackawanna, ..	W. Y. Moffatt, ...	Dunmore, ...	W. Y. Moffatt, ...	Dunmore, ...	None

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Pennsylvania Coal Co.													
Pennsylvania No. 1,	Lackawanna,	606,421	32,579	2,111	641,111	284	1,372	3	2	736,200	.....	18,593	86
Pennsylvania No. 5,		319,073	9,629	9,498	338,200	287	624	2	1	280,725	.....	12,142	49
Underwood,		49,190	15,342	164	64,696	123	413	.....	3	27,275	.....	77,396	6
Totals,	.....	974,684	57,550	11,773	1,044,007	.....	2,409	5	6	1,044,200	.....	108,131	141
Scranton Coal Co.													
Pine Brook,	Lackawanna,	449,660	32,000	5,200	486,860	215	1,031	3	8	700,600	16,600	.....	113
Mount Pleasant,		126,560	20,275	2,187	149,022	168	384	1	8	269,700	8,400	.....	43
Totals,	.....	576,220	52,275	7,387	635,882	.....	1,415	4	16	970,300	25,000	.....	156
Delaware, Lackawanna and Western Railroad Co.													
Diamond,	Lackawanna,	436,196	45,695	.....	481,891	205	1,236	15	3	656,325	70,051	.....	157
Manville,		52,951	17,263	648	70,862	105	367	1	1	150,225	9,264	.....	44
Diamond Washery,		3,990	3,480	.....	7,470	18	38	.....	.....	.....	.....	.....	2
Totals,	.....	493,137	66,438	648	560,223	.....	1,641	16	4	806,550	79,315	.....	203
Price-Pancoast Coal Co.													
Pancoast,	Lackawanna,	497,311	55,050	5,078	557,439	240	1,400	3	10	780,750	19,550	.....	120

TABLE 2 --Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Economy Light, Heat and Power Co. Economy Washery,	Lackawanna,	†102,369	50	.....	102,419	309	9	.....	....	.....	.....	.....	.....
Green Ridge Coal Co. Green Ridge,	Lackawanna,	57,453	6,333	22,540	86,326	174	189	.....	1	58,550	2,500	.....	24
Nay Aug Coal Co. Nay Aug,	Lackawanna,	71,435	3,468	.....	74,903	277	214	.....	4	14,000	5,543	.....	27
Hudson Coal Co. Manville,	Lackawanna,	55,545	16,752	841	73,138	103	*	1	1	.....	.....	.....	4
Spencer Coal Co. Spencer,	Lackawanna,	52,462	8,000	7,731	68,193	224	197	.....	1	12,000	8,500	.....	24
Carney and Brown Coal Co. Carney and Brown,	Lackawanna,	26,675	90	11,035	37,800	212	106	.....	.....	47,050	3,950	.....	16
No. 6 Coal Co. No. 6,	Lackawanna,	186	10	6,310	6,506	171	30	.....	1	.....	.....	1,300	8
Grand totals,	.....	2,907,477	266,016	73,343	3,246,836	.....	7,610	29	44	3,733,400	144,358	109,431	723

*Employes and explosives included with D. L. and W. R. R. Co.
†Used at their own plant.

TABLE 2 —Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons.	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Pennsylvania Coal Co.,	Lackawanna,	.....	.....	32	5,300	5,300	.....	5	.....	28	78	3,980	4	2,800	2,050	9	1
Scranton Coal Co.,		12	360	11	1,825	2,185	.....	1	.....	8	28	2,293	7	5,980	3,900	3	3
Delaware, Lackawanna and Western Railroad Co.,		9	933	4	2,000	2,933	.....	4	.....	4	36	2,899	17	7,733	6,898	.....	.....
Price-Pancoast Coal Co.,		.....	.....	11	1,835	1,835	.....	.....	.....	.....	24	1,693	3	4,000	2,500	2	2
Green Ridge Coal Co.,		.....	.....	9	1,175	1,175	.....	.....	.....	3	8	594	.....	.....	.....	.....	.....
Nay Aug Coal Co.,		.....	.....	3	240	240	.....	.....	.....	.....	4	130	.....	.....	.....	.....	.....
Hudson Coal Co.,		.....	.....	4	900	900	.....	.....	.....	.....	16	809	.....	.....	.....	.....	.....
Spencer Coal Co.,		5	175	2	250	425	.....	6	.....	6	6	370	.....	.....	.....	.....	.....
Carney and Brown Coal Co.,		.....	.....	3	360	360	.....	.....	.....	.....	4	115	.....	.....	.....	.....	.....
Totals,	.....	26	1,468	79	13,885	15,353	.....	16	.....	49	204	12,883	31	20,513	15,348	14	6

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Pennsylvania Coal Co., ..	Lackawanna,..	5	15	1	514	589	109	37	8	329	135	1,742	1	3	74	43	147	30	4	365	667	2,409
Scranton Coal Co., ...		2	3	8	370	330	218	47	9	....	146	1,133	....	2	16	28	66	61	2	107	282	1,415
Delaware, Lackawanna and Western Railroad Co.,*		5	....	11	438	506	164	42	9	166	5	1.346	1	4	17	42	50	15	8	158	295	1,641
Price-Pancoast Coal Co.,		3	2	9	318	358	185	75	7	55	153	1,165	1	1	7	24	63	39	6	94	235	1,400
Economy Light, Heat and Power Co., ...		....	....	....	.....	.....	....	....	....	....	....	.....	....	1	....	1	....	....	....	7	9	9
Green Ridge Coal Co., ...		1	....	1	44	46	21	....	2	2	7	124	1	1	7	9	15	....	2	30	65	189
Nay Aug Coal Co., ...		1	1	....	69	79	20	1	....	1	6	178	1	1	2	2	3	1	4	22	36	214
Spencer Coal Co., ...		1	1	....	52	52	12	....	2	24	....	144	1	1	3	9	....	....	2	37	53	197
Carney and Brown Coal Co., ...		1	2	....	21	21	10	....	....	6	7	68	1	1	2	4	13	....	1	16	38	106
No. 6 Coal Co., ...		1	....	....	8	8	2	....	....	....	....	19	....	1	....	....	4	....	1	5	11	30
Totals, ...	.....	20	24	30	1,834	1,989	741	202	37	583	459	5,919	7	16	128	162	361	146	30	841	1,691	7,610

*Employes of Hudson Coal Company included.

TABLE 8. Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Pennsylvania Coal Co.,	Lackawanna, ..	17	14	16	16	21	22	20	22	22	22	17	22	231
Scranton Coal Co.,		16	12	15	15	16	18	15	17	17	18	16	17	192
Delaware, Lackawanna and Western Railroad Co., ..		16	10	6	18	21	20	15	17	22	21	21	19	206
Price-Pancoast Coal Co.,		24	21	22	20	20	21	23	22	5	19	22	21	240
Green Ridge Coal Co.,		13	16	16	15	16	17	16	15	14	12	12	12	174
Nay Aug Coal Co.,		25	17	23	25	24	26	17	19	25	26	24	26	277
Hudson Coal Co.,		18	.....	13	.....	17	.....	20	.....	19	.....	16	.....	103
Spencer Coal Co.,		25	13	16	14	25	17	8	21	25	25	23	22	234
Carney and Brown Coal Co.,		19	19	18	19	9	11	19	21	19	18	19	21	212
No. 6 Coal Co.,		24	23	21	18	3	.....	.....	.....	25	17	17	23	171

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 10	Samuel Holman, ...	American, ..	Driver's helper,	18	S.	....	....	Diamond, ...	Lackawanna.	Killed by trip of mine cars which he boa ded on the way home. Outside.
31	Joseph Hillerman, ...	German, ...	Mucker, ...	24	S.	....	....	Pennsylvania No. 1.		Killed by delayed blast fired by battery in water tunnel driven through old workings.
	Ernest Kehr, ...	German, ...	Mucker, ...	24	M.	1	....			
Feb. 13	Ignatz Derda, ...	Slavonian, ..	Laborer, ...	26	S.	...	...	Pine Brook, ...		Instantly killed by fall of roof at face. There were concealed slips.
18	Joseph Demkovitch, ..	Greek, ...	Shaftman, ...	33	M.	1	1	Diamond, ...		Instantly killed by falling down shaft while thawing out the fans at one of the landings.
19	Klim Chirkas, ...	Russian, ...	Laborer, ...	33	M.	1	2	Pine Brook, ...		Instantly killed by fall of roof at face. There were concealed slips.
May 7	Joseph Lavinski, ...	Polish, ...	Miner, ...	28	M.	1	...	Mount Pleasant, .		Killed by blast while fleeing to a place of safety—20 feet from face.
7	Joseph Dorack, ...	Hungarian, .	Miner, ...	34	M.	1	4	Pancoast, ...		Killed by falling down shaft. Jumped partly on empty cage after it had been rapped up by footman.
July 3	Nicholas Kruttles, ...	Lithuanian,	Miner, ...	44	M.	1	6	Manville, ...		Fatally injured by fall of roof at face while preparing to stand a prop. Died 2 hours later.
Aug. 13	James W. Cappell, ...	English, ...	Company man,	25	S.	....	...	Pennsylvania No. 5.		Fatally injured by mine cars on main road. Died August 22.
13	James Moran, ...	Irish, ...	Miner, ...	50	M.	1	4	Manville, ...		Instantly killed by fall of roof at face. There were concealed slips.
Sept. 1	Joseph Horvatt, ...	Hungarian, .	Miner, ...	30	M.	1	3	Pancoast, ...		Fatally injured by premature explosion of powder, caused by pushing tight cartridges into hole that he was preparing for blasting. Died the following day.
Oct. 6	Michael J. Ruane, ...	Irish, ...	Miner, ...	44	M.	1	8	Pennsylvania No. 5.		Killed by premature blast at face.
21	Peter Sachy, ...	Magyar, ...	Laborer, ...	30	M.	1	2	Pancoast, ...		Killed by fall of roof at face. There were concealed slips.
31	Walter Hartmann, ...	English, ...	Wheelman, ...	26	M.	1	2	Pine Brook, ...		Fatally injured by mine cars on main road. Died November 5.

Dec.	9	William Walakones, ..	Polish,.....	Laborer, ...	26	S.	....	....	Diamond, ...	Lackawanna.	Killed while being lowered into the shaft. The coroner's jury after due consideration of the evidence of the witnesses, and also from an examination of the broken cage, shaft, etc., found that the cause of the accident was unknown. A description of this accident is given in the preliminary part of the report.
		Anthony Shonus, ...	Polish,.....	Laborer, ...	24	S.	....	....			
		John Pazlay, ...	Polish,.....	Miner, ...	28	S.	....	....			
		Thomas Thomas, ...	Welsh, ...	Doorman, ...	60	M.	1	....			
		John Buenglitis, ...	Polish,.....	Miner, ...	26	S.	....	....			
		Joseph Sulgis, ...	Polish,.....	Miner, ...	42	M.	1	1			
		James Griff, ...	Polish,.....	Miner, ...	42	M.	1	....			
		Constani Palsko, ...	Polish,.....	Miner, ...	48	M.	1	8			
		John Savage, ...	Polish,.....	Miner, ...	42	M.	1	5			
		Anthony Gulley, ...	Polish,.....	Miner, ...	32	M.	1	4			
		Charles Tomakas, ...	Polish,.....	Miner, ...	32	M.	1	3			
		Peter Thomkus, ...	Polish,.....	Laborer, ...	26	S.	....	....			
		John Woolick, ...	Lithuanian,	Laborer, ...	27	M.	1	....			
	26	Alex. Marousich, ...	Slavonian, ..	Laborer, ...	27	M.	1	1	Pensylvania No. 1.		Killed by fall of roof 40 feet from face.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 24	Frank Swagdis, ...	Lithuanian,	Slatepicker, ...	14	S.	Pine Brook, ...		Body bruised by machinery in breaker. Outside.
Feb. 3	William Shelinsky, ...	Polish,.....	Miner, ...	45	M.	Pancoast, ...		Leg fractured by mine car at face.
9	Stanley Valumas, ...	Russian, ...	Miner, ...	38	M.	Pancosat, ...		Back and hip bruised by fall of roof at face.
	Philip Rush, ...	American,..	Driver, ...	17	S.	Pancoast, ...		Back bruised by mine cars on main road.
13	Anthony Patrick, ...	Polish,.....	Miner, ...	29	S.	Pine Brook, ...		Body bruised by fall of roof at face.
24	Joseph Oiloski, ...	Austrian, ..	Driver, ...	21	S.	Mount Pleasant, ...		Hip injured by mine cars on main road.
March 17	Carl Weller, ...	German,....	Miner, ...	50	M.	Nay Aug, ...		Head injured by mine cars on main road.
	Angelo Ritz, ...	Italian,.....	Laborer, ...	34	M.	Nay Aug, ...		Shoulder injured.
24	John Quinnan, ...	American,..	Carpenter, ...	21	S.	Underwood, ...		Spine fractured by falling from roof of new car shops. Outside.
April 7	John Plevnock, ...	Russian, ...	Laborer, ...	32	S.	Underwood, ...		Skull fractured by delayed blast on main road.
	Joseph Kane, ...	American,..	Laborer, ...	27	M.	Underwood, ...		Skull and left leg fractured.
11	Charles Feires, ...	German,....	Laborer, ...	38	M.	Pine Brook, ...	Lackawanna.	Skull fractured by flying coal from blast 180 feet from face.
22	Adam Dunofski, ...	Polish,.....	Doorman, ...	56	M.	Pancoast, ...		Scalp wounds and body bruised by mine cars on main road.
May 8	John Andreani, ...	Italian,.....	Laborer, ...	26	S.	Nay Aug, ...		Leg fractured by fall of roof at face.
11	Hugh Fitzpatrick, ...	Irish, ...	Miner, ...	37	M.	Green Ridge, ...		Two ribs broken by premature blast at face.
27	Thomas Prilla, ...	Polish,.....	Company man, ...	38	M.	Pancoast, ...		Body bruised by mine cars while unloading rock in old workings.
June 13	Charles Bestock, ...	Italian,.....	Miner, ...	39	S.	Mount Pleasant, ...		Spine fractured by fall of roof at face.
15	John Washcavage, ...	Slavonian,..	Driver, ...	21	S.	Nay Aug, ...		Hand injured by mine cars in chamber.
18	Joseph Ratzcavage, ..	Polish,.....	Miner, ...	32	M.	Pancoast, ...		Arms and face burned by powder explosion at face.
19	Pasqua Parela, ...	Italian,.....	Laborer, ...	22	S.	Pennsylvania No. 5, ...		Spine fractured by fall of roof in crosscut 15 feet from face.
20	Anthony Josephitus, ..	Lithuanian,	Miner, ...	30	S.	Pancoast, ...		Arms burned by powder explosion at face.
	Anthony Matzuka, ...	Lithuanian,	Laborer, ...	20	S.	Pancoast, ...		Arms burned by powder explosion at face.
Aug. 8	Martin Lynett, ...	Irish, ...	Miner, ...	53	M.	Mount pleasant, ...		Arm broken by fall of roof at face.
10	Adolph Savitski, ...	Polish,.....	Driver, ...	18	S.	Pancoast, ...		Hip dislocated by mine cars on main road.
15	Bernard Grack, ...	German,....	Driver, ...	17	S.	Mount Pleasant, ...		Leg fractured by mine cars on main road.

Aug.	18	Earl Ferris, ...	American, ..	Driver, ...	22	M.	Diamond, ...	Lackawanna.	Arm fractured. Kicked by mule on main road.
	28	Frank Fisher, ...	Polish,.....	Miner, ...	47	M.	Mount Pleasant, ...		Arm dislocated by premature blast at face.
	31	Mike Murray, ...	American, ..	Laborer, ...	28	M.	Diamond, ...		Back injured by fall of roof about 100 feet from face.
Sept.	9	Mike Collins, ...	Irish, ...	Footman, ...	50	M.	Mount Pleasant, ...		Shoulder and ribs injured by mine cars at foot of shaft.
	15	Alex. Howan, ...	Lithuanian,	Miner, ...	31	M.	Diamond, ...		Body bruised by premature blast at face.
Oct.	5	Pasqua Volinno, ...	Italian, ...	Miner, ...	41	M.	No. 6, ...		Ankle broken by fall of roof at face.
	10	Shandor Past, ...	Hungarian, .	Miner, ...	36	M.	Pancoast, ...		Leg fractured by fall of roof at face.
	14	George Linko, ...	Polish,.....	Laborer, ...	50	M.	Pine Brook, ...		Arm and pelvis fractured while unloading props. Outside.
	19	Joseph Hurney, ...	Slavonian, ..	Miner, ...	37	M.	Pennsylvania No. 1, ...		Body bruised by premature blast at face.
	23	John Putaskie, ...	Austrian, ..	Miner, ...	21	S.	Mount Pleasant, ...		Shoulder dislocated by mine cars on main road.
	27	Joseph Bosinsky, ...	Polish,.....	Miner, ...	44	M.	Pine Brook, ...		Body bruised by premature blast at face.
		Joseph Golinnis, ...	Polish,.....	Laborer, ...	32	S.			
Nov.	25	George Shulitch, ...	Slavonian, ..	Laborer, ...	32	M.	Manville, ...		Head and elbow injured by fall of top coal at face.
	27	John Pavaseckie, ...	Austrian, ..	Miner, ...	48	M.	Mount Pleasant, ...		Body bruised by premature blast at face.
	28	Michael Kelly, ...	Irish, ...	Miner, ...	40	M.	Spencer, ...		Spine fractured by fall of roof while robbing pillars.
Dec.	11	Victor Adamski, ...	Polish,.....	Slatepicker, ...	14	S.	Pine Brook, ...		Legs broken by machinery in breaker. Outside.
		Alex. Rominick, ...	Polish,.....	Miner, ...	68	M.	Pine Brook, ...		Shoulder fractured and knee injured by mine cars on main road.
	18	William Kelly, ...	Irish, ...	Miner, ...	37	M.	Manville, ...		Injured internally by fall of roof at face.
	26	John Tur, ...	Slavonian, ..	Miner, ...	36	M.	Pennsylvania No. 1, ...		Ankle and head injured by fall of roof 40 feet from face.

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Pennsylvania No. 1 Colliery:

Pennsylvania No. 1. Shaft and No. 2 Drift—Ventilation drainage and safety conditions, good.

Gipsy Grove Shaft.—Ventilation fair. Drainage and safety conditions, good.

Clark and Marcy Slope.—Ventilation, drainage and safety conditions, good.

Pennsylvania No. 5 Colliery:

Pennsylvania No. 5. Shaft.—Ventilation, drainage and safety conditions, good.

Underwood Colliery:

Underwood Shaft.—Ventilation, drainage and safety conditions, good.

SCRANTON COAL COMPANY

Pine Brook Colliery:

Pine Brook Shaft.—Ventilation, drainage and safety conditions, good.

Mount Pleasant Colliery:

Mount Pleasant Main Shaft.—Ventilation, drainage and safety conditions, good.

Mount Pleasant Surface Shaft.—Ventilation, drainage and safety conditions, fair.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Diamond Colliery:

Diamond No. 2 Shaft and Diamond Tripp Shaft.—Ventilation, drainage and safety conditions, good.

Diamond Tripp Slope.—Ventilation fair. Drainage and safety conditions, good.

Diamond Drift.—Ventilation, drainage and safety conditions, fair.

Manville Colliery:

Manville Shaft.—Ventilation, drainage and safety conditions, fair.

PRICE-PANCOAST COAL COMPANY

Pancoast Colliery:

Pancoast Shaft.—Ventilation, drainage and safety conditions, good.

GREEN RIDGE COAL COMPANY

Green Ridge Colliery:

Green Ridge Slope.—Ventilation, drainage and safety conditions, fair.

NAY AUG COAL COMPANY

Nay Aug Colliery:

Nay Aug No. 1 Slope, Nay Aug Drift and Nay Aug No. 3 Drift.—Ventilation good. Drainage and safety conditions, fair.

SPENCER COAL COMPANY

Spencer Colliery:

Spencer Nos. 1 and 2 Shafts.—Ventilation good. Drainage and safety conditions, fair.

CARNEY AND BROWN COAL COMPANY

Carney and Brown Colliery:

Carney and Brown Slope.—Ventilation, drainage and safety conditions, fair.

NO. 6 COAL COMPANY

No. 6 Colliery:

No. 6 Slope.—Ventilation and drainage good. Safety conditions, fair.

IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

Pennsylvania No. 1 Colliery.—A rock tunnel 5 by 7 feet and 250 feet long, was driven from the First Dunmore vein, No. 1 shaft, to the First Dunmore vein, through faulty ground, for the purpose of ventilation.

No. 5 Colliery.—Brick building erected, 41 by 150 feet, to take care of outside stock. A new and more modern pump room was finished in Third Dunmore vein near foot of shaft.

A rock tunnel about 500 feet long and 7 by 10 feet in cross-section was driven from the Third Dunmore vein through an upthrow in the Bunker Hill section.

Underwood Colliery.—This colliery was placed in operation April 28. The work of construction has been going on during the year. The boiler plant, power plant, engine house and other necessary buildings are about completed.

SCRANTON COAL COMPANY

Pine Brook Colliery.—Installed 300 Maxim water tube boiler.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Diamond Colliery.—Built new washhouse and sub-station. Installed one 7-ton electric locomotive with reel, etc.

PRICE-PANCOAST COAL COMPANY

Pancoast Colliery.—A tunnel 600 feet long was driven from No. 3 to No. 2 vein.

NAY AUG COAL COMPANY

Nay Aug Colliery.—Built new washhouse. Also built addition to mule barn outside. Installed Hayes derailer above breaker as a safety precaution A First Aid team was trained in the Y. M. C. A. and Bureau of Mines car.

SPENCER COAL COMPANY

Spencer Colliery.—Installed electric hoist in No. 1 shaft, 100 H. P. motor to replace steam hoist. Installed four 30 H. P. motors in mines, and new rotary pump for washery. Concreted 40 feet of No. 1 shaft from No. 1 to No. 2 Dunmore vein. Built 100 feet of new trestle and new scraper line at breaker.

CARNEY AND BROWN COAL COMPANY

Carney and Brown Colliery.—A second opening driven from Marcy vein to surface, a distance of 150 feet. A new hoisting tower was erected.

11—21—1915

FOURTH DISTRICT

LACKAWANNA COUNTY

Scranton, Pa., February 8, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit my report as Inspector of Mines for the Fourth Anthracite District, for the year ending December 31, 1914.

Respectfully submitted,

JENKIN T. REESE, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	14
Number of mines,	35
Number of mines in operation,	35
Number of tons of coal shipped to market,	3,541,743
Number of tons used at mines for steam and heat,	130,359
Number of tons sold to local trade and used by employes,	136,203
Number of tons produced,	3,808,305
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	6,945
Number of persons employed outside,	1,643
Number of fatal accidents inside of mines,	18
Number of fatal accidents outside,	4
Number of non-fatal accidents inside of mines,	69
Number of non-fatal accidents outside,	1
Number of tons of coal produced per fatal accident inside,	211,573
Number of tons produced per fatal accident outside,	952,076
Number of tons produced per fatal accident inside and outside,	173,105
Number of persons employed per fatal accident inside,	385
Number of persons employed per fatal accident outside,	411
Number of persons employed per fatal accident inside and outside,	390
Number of persons employed per non-fatal accident inside,	101
Number of persons employed per non-fatal accident outside,	1,643
Number of persons employed per non-fatal accident inside and outside,	123
Number of wives made widows,	15
Number of children made orphans,	53
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	5
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	97
Number of electric motors used outside,	.....
Number of gasoline locomotives used inside,	1
Number of gasoline locomotives used outside,	.....
Number of fans in use,	25
Number of furnaces in use,	.....
Number of gaseous mines in operation,	22
Number of non-gaseous mines in operation,	13
Number of new mines opened,	1
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware, Lackawanna and Western Railroad Company,	2,990,482
Hudson Coal Company,	296,088
Scranton Coal Company,	217,334
Peoples Coal Company,	179,201
South Side Coal Company,	58,277
Thorne-Neale Washery Company,	35,890
Minooka Coal Company,	18,324
Carleton Coal Company,	11,225
East Mountain Coal Company,	1,484
Total,	3,808,305

Production by Counties

Lackawanna,	3,808,305

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Delaware, Lackawanna and Western Railroad Co.,	14	4	18	46	1	47	213,606	65,010	5,415	1,123	6,538	387	281	118	1,123
Hudson Coal Co.,	1	.....	1	8	.....	8	296,088	37,011	654	207	861	654	.....	82	.....
Scranton Coal Co.,	1	.....	1	3	.....	3	217,334	72,445	449	91	540	449	.....	150	.....
Peoples Coal Co.,	2	.....	2	11	.....	11	89,601	16,291	334	101	435	167	.....	30	.....
Minooka Coal Co.,	.....	.....	.....	1	.....	1	.....	18,324	43	16	59	.....	.....	43	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	50	105	155	.....	.....	.....	.....
Totals and averages for district, ...	18	4	22	69	1	70	211,573	55,193	6,945	1,643	8,588	385	411	101	1,643

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of roof,	....	....	....	1	2	....	2	....	1	1	2	....	9	50.00
Mine cars,	....	....	1	....	....	....	....	....	....	....	....	....	1	5.56
Explosions of powder and dynamite,	....	....	....	....	....	1	...	....	....	....	....	1	2	11.11
Blasts, premature and otherwise,	....	2	....	....	....	1	1	....	2	....	....	....	6	33.33
Totals,	....	2	1	1	2	2	3	....	3	1	2	1	18	100.00
Outside														
Cars,	....	....	....	....	....	1	....	....	....	....	....	....	1	25.00
Electricity,	....	....	....	....	....	....	....	....	....	1	....	....	1	25.00
Struck by barrel,	....	....	....	....	....	1	....	....	....	....	....	....	1	25.00
Burned on rock dump,	....	1	....	....	....	....	....	....	....	....	....	....	1	25.00
Totals,	....	1	....	....	....	2	....	....	....	1	....	....	4	100.00
Grand totals inside and outside,	....	3	1	1	2	4	3	....	3	2	2	1	22	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	1	....	....	....	....	....	....	....	1	....	2	....	4	5.79
Falls of roof,	....	....	....	....	....	2	3	1	1	2	6	1	16	23.19
Mine cars,	....	1	1	4	1	2	1	....	2	2	....	2	16	23.19
Explosions of gas.	....	....	....	....	...	....	....	....	1	....	....	....	1	1.45
Explosions of powder and dynamite,	....	....	...	1	....	1	....	....	....	....	1	...	3	4.34
Blasts, premature and otherwise,	....	1	1	4	1	....	2	2	2	....	....	2	15	21.74
Struck by piece of coal,	....	....	....	....	....	....	....	....	....	....	1	1	2	2.90
Electricity,	....	....	....	....	....	....	....	....	....	....	1	....	1	1.45
Struck by rope,	....	....	....	....	....	....	....	....	....	1	....	....	1	1.45
Mules,	....	....	....	....	....	....	....	1	....	....	....	....	1	1.45
Machinery,	....	....	....	1	....	1	....	1	....	....	....	....	3	4.35
Latches,	....	....	1	....	....	....	....	....	....	....	....	....	1	1.45
Falling,	....	....	1	....	....	....	....	....	....	....	....	1	2	2.90
Struck by pipe,	....	....	....	....	1	....	....	....	....	1	....	....	2	2.90
Cage,	....	....	1	....	....	....	....	....	....	....	....	....	1	1.45
Total,	1	2	5	10	3	6	6	5	7	6	11	7	69	100.00
Outside														
Machinery,	....	....	....	....	....	1	....	....	....	....	....	....	1	100.00
Totals,	....	....	....	....	....	1	....	....	....	....	....	....	1	100.00
Grand totals inside and outside,	1	2	5	10	3	7	6	5	7	6	11	7	70	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	2	....	1	1	1	2	....	3	....	1	1	12
Miners' laborers,	....	....	....	....	1	1	1	....	....	1	1	....	5
Machinists,	....	....	1	....	....	....	....	....	....	....	....	....	1
Totals,	....	2	1	1	2	2	3	....	3	1	2	1	18
Outside													
Electricians,	....	....	....	....	....	....	....	....	....	1	....	....	1
Wipers,	....	....	....	....	....	1	....	....	....	....	....	....	1
Coal inspectors,	....	....	....	....	....	1	....	....	....	....	....	....	1
Dumpmen,	....	1	....	....	....	....	....	....	....	....	....	....	1
Totals,	....	1	....	....	....	2	....	....	....	1	....	....	4
Grand totals inside and outside,	....	3	1	1	2	4	3	...	3	2	2	1	22

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Mine foremen,	....	....	....	1	....	....	....	....	....	....	....	....	1
Fire bosses and assistants,	....	....	....	....	1	....	....	....	....	....	....	....	1
Miners,	....	....	2	2	....	3	5	1	5	3	5	1	27
Miners' laborers,	....	2	....	2	1	1	1	3	1	....	4	4	19
Drivers and runners,	....	....	....	2	1	....	....	1	....	1	....	....	5
Doorboys and helpers,	....	....	1	....	....	1	....	....	....	....	1	....	3
Company men,	1	....	....	....	....	....	....	....	....	2	....	....	3
Brakemen,	....	....	....	2	....	....	....	....	....	....	....	2	4
Electricians,	....	....	....	1	....	....	....	....	....	....	....	....	1
Motormen,	....	....	1	....	....	1	....	....	1	....	1	....	4
Flushmen,	....	....	1	....	....	....	....	....	....	....	....	....	1
Totals,	1	2	5	10	3	6	6	5	7	6	11	7	69
Outside													
Engineers and firemen,	....	....	....	....	....	1	....	....	....	....	....	....	1
Totals,	....	....	....	....	....	1	....	....	....	....	....	....	1
Grand totals inside and outside,	1	2	5	10	3	7	6	5	7	6	11	7	70

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	1	....	....	2	....	....	....	1	....	....	4
English,	....	....	....	....	....	....	1	....	1	....	....	....	2
Polish,	....	1	....	1	2	1	2	....	2	1	....	....	10
Italian,	....	1	....	....	....	....	....	....	....	....	....	....	1
Lithuanian,	....	....	....	....	....	....	....	....	....	....	1	1	2
Russian,	....	....	....	....	....	....	....	....	....	....	1	....	1
Greek,	....	....	....	....	....	1	....	....	....	....	....	....	1
Swedish,	....	1	....	....	....	....	....	....	....	....	....	....	1
Totals,	....	3	1	1	2	4	3	....	3	2	2	1	22

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	....	2	5	....	2	....	1	2	2	3	1	19
English,	....	....	....	....	....	....	....	....	....	....	2	....	2
Welsh,	....	....	2	1	2	....	1	1	....	....	1	....	8
Irish,	....	....	1	2	....	....	1	....	....	1	1	....	5
German,	....	....	....	....	....	....	....	....	....	1	....	1	2
Polish,	....	2	....	1	....	4	3	2	3	1	3	4	23
Hungarian,	....	....	....	....	....	....	....	1	....	....	....	....	1
Italian,	....	....	....	1	....	1	....	....	1	....	1	....	4
Lithuanian,	....	....	....	....	1	....	1	....	1	1	....	....	4
Russian,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	1	2	5	10	3	7	6	5	7	6	11	7	70

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Delaware, Lackawanna and Western Railroad Co.																
Bellevue Colliery:																
Bellevue,	Shaft,	Gaseous,	Fan,	18	8	3	80	2	Vulcan,	Steam,	..	17	289,480	255,000	301,450	876
Bellevue,	Slope,	Gaseous,	Fan,	15	3.6	4.6	56	.7	Guibal,	Steam,	..	2	48,750	49,750	49,900	
Sloan Colliery:																
Sloan,	Shaft,	Gaseous,	Fan,	24	8	6	70	2.	Guibal,	Steam,	..	7	172,475	160,370	178,685	397
Sloan (Surface vein),	Shaft,	Gaseous,	Fan,	24	8	6	70	2.1	Guibal,	Steam,	..	6	138,800	126,500	169,500	206
Sloan,	Drift,	Non-gas.,	Fan,													
Central,	Shaft,	Gaseous,	Fan,	24	8	6	71	2.1	Guibal,	Steam,	..	9	114,560	109,330	121,610	286
Archbald Colliery:																
Archbald,	Shaft,	Gaseous,	Fan,	24	8	6	66	1.8	Guibal,	Steam,	..	16	221,390	219,930	227,135	805
Hampton,	Slope,	Gaseous,	Fan,	12	4	4	100	1.	Open,	Steam,	..	1	34,680	35,585	50,665	
Hyde Park Colliery:																
Hyde Park,	Shaft,	Gaseous,	Fan,	24	8	6	66	1.4	Guibal,	Steam,	..	11	159,060	119,950	180,640	491
Central,	Shaft,	Gaseous,	Fan,	14	4.5	4	116	1.3	Open,	Electricity,	..	2	61,200	24,200	96,000	
Surface,	Slope,	Non-gas.,	Fan,	14	4.5	4	81	.75	Guibal,	Electricity,	..	5	74,060	58,590	79,390	235
National Colliery:																
National,	Shaft,	Gaseous,	Fan,	25	8	7	60	1.5	Guibal,	Steam,	..	9	174,200	159,400	195,400	
National,	Slope,	Gaseous,														
National,	Drift,	Gaseous,	Fan,	8	2.8	2.2	80	.5	Guibal,	Electricity,	..	1	12,000	11,000	12,500	619
National,	Drift,	Gaseous,														
Dodge Colliery:																
Dodge,	Shaft,	Gaseous,	Fan,	25	8	6.6	58	1.4	Vulcan,	Steam,	..	9	141,438	122,258	213,067	603
Dodge,	Slope,	Non gas.,	Fan,	15	3.6	4.6	56	.7	Guibal,	Steam,	..	1	24,913	19,624	25,117	
Holden Colliery:																
Holden,	Shaft,	Gaseous,	Fan,	25	8	6	56	.1	Guibal,	Steam,	..	7	190,810	160,753	232,718	356
Holden,	Slope,	Gaseous,	Fan,	17	6	3.3	70	1.4	Guibal,	Steam,						

Continental Colliery:																
Continental, ...	Shaft,....	Gaseous, ..	Fan, ...	24	8	6	66	2	Guibal, ..	Steam,.....	..	10	189,475	190,075	224,850	518
Hudson Coal Co.																
Greenwood Colliery:																
Greenwood No. 1 (New),	Shaft,.....	Gaseous, ..	Fan, ...	17	5	5	75	.4	Guibal, ..	Steam,.....	..	2	29,900	27,500	32,450	112
Greenwood No. 1 (Old),.	Shaft,.....	Non-gas.,..	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	..	29,800	27,900	31,900	115
Greenwood Nos. 1 and 2,	Slope,.....	Non-gas.,..	Fan, ...	14	4	4	80	.4	Guibal, ..	Steam,.....	..	..	29,900	27,100	33,300	91
Greenwood Nos. 1 and 2,	Drift, ...	Non-gas.,..	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	..	32,700	30,700	34,900	41
Greenwood No. 8, ...	Drift, ...	Non-gas.,..	Natural, ..	.....	.....	.....	.....	.....	... .	.....	..	..	18,400	17,400	19,100	50
Greenwood No. 11, ...	Drift, ...	Non-gas.,..	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	..	9,100	8,500	10,200	30
Greenwood No. 2, ...	Shaft,.....	Gaseous, ..	Fan, ...	17	5	5	75	.7	Guibal, ..	Steam,.....	..	2	45,700	40,800	52,389	102
Greenwood No. 16, ...	Drift, ...	Non-gas.,..	Fan, ...	11	3.25	2.5	70	.3	Guibal, ..	Steam,.....	..	..	15,000	14 040	16,500	37
Greenwood No. 14, ...	Drift, ...	Non-gas.,..	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	..	9,600	8,259	11,700	29
Scranton Coal Co.																
Capouse Colliery:																
Capouse, ...	Shaft,.....	Gaseous, ..	Fan, ...	20	5	5.6	75	1	Guibal, ..	Steam,....}	..	9	140,000	135,000	152,500	514
Capouse, ...	Shaft,.....	Gaseous, ..	Fan, ...	18	4.8	5	80	1	Guibal, ..	Steam,....}						
Peoples Coal Co.																
Oxford Colliery:																
Oxford, ...	Shaft,.....	Gaseous, ..	Fan, ...	16	6	5	95	.7	Vulcan, ..	Steam,.....	..	10	112,000	112,000	120,000	334
Minooka Coal Co.																
Minooka Colliery:																
Minooka, ...	Drift,.....	Non-gas.,..	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	2	15,341	14,160	16,230	20
Carleton Coal Co.																
Carleton Colliery:																
Carleton, ...	Slope,.....	Non-gas.,..	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	5	27,000	26,400	29,000	34
East Mountain Coal Co.																
East Mountain Colliery:																
East Mountain, ...	Drift, ...	Non-gas.,..	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	1	8,000	8,200	8,400	15

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Delaware, Lackawanna and Western Railroad Co.						
Bellevue, National, Dodge, Holden, Continental, Sloan, Archbald, Hyde Park,	Lackawanna,	C. E. Tobey,	Scranton,	David Lloyd, / T. J. Williams,	Scranton,	D., L. and W.
Washeries						
Hampton, Hyde Park, Archbald,	Lackawanna,	C. E. Tobey,	Scranton,	G. J. Wethers, / T. J. Williams, / T. J. Williams,	Scranton,	D., L. and W.
Hudson Coal Co.						
Greenwood, Greenwood Washery,	Lackawanna,	C. C. Rose,	Scranton,	E. R. Pettebone,	Dorranceton,	D. and H.
Scranton Coal Co.						
Capouse,	Lackawanna,	W. L. Allen,	Peckville,	Daniel Young, Inside. / J. F. Cummings, Outside.	Scranton,	N. Y. O. and W.
Peoples Coal Co.						
Oxford,	Lackawanna,	S. D. Dimmick,	Scranton,	William McLaughlin,	Scranton,	D., L. and W.
South Side Coal Co.						
South Side Washery,	Lackawanna,	Joseph E. Bradley,	Scranton,	F. P. Benjamin,	Scranton,	D. and H.
Thorne-Neale Washery Co.						
Minooka Washery,	Lackawanna,	James B. Neale,	Minersville,			D. and H.
Minooka Coal Co.						
Minooka,	Lackawanna,	E. R. Shurtleff,	Scranton,	William Cottes,	Minooka,	L. and W. V.
Carleton Coal Co.						
Carleton,	Lackawanna,	John Gibbons,	Scranton,	John Gibbons,	Scranton,	Local trade
East Mountain Coal Co.*						
East Mountain,	Lackawanna,	W. Y. Moffat,	Dunmore,	W. Y. Moffat,	Dunmore,	Erie

*New operation.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Delaware, Lackawanna and Western Railroad Co.													
Bellevue,	Lackawanna,	545,678	175	20,636	576,489	269	1,021	6	6	534,125	25,557	.....	49
Sloan,		468,517	167	24	468,708	266	1,050	1	4	774,100	69,533	1,237	25
Archbald,		397,825	19,150	156	417,131	234	954	2	4	493,275	6,169	.....	103
Hyde Park,		220,907	32	26,783	347,722	259	852	2	12	582,800	44,250	.....	37
National,		295,237	14,011	4,868	314,116	269	717	2	4	416,875	33,725	.....	67
Dodge,		304,609	28	254	304,291	240	722	2	4	443,225	35,706	50	35
Holden,		188,787	14,502	2,195	205,484	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.....	[illegible]
Continental,		185,813	52	2,378	188,243	208	631	1	4	272,225	21,635	.....	63
		2,706,773	48,117	67,294	2,822,184	.....	6,384	17	47	3,735,025	252,693	1,287	401
Washeries													
Archbald,	Lackawanna,	65,257	.....	.....	65,257	106	58	.....	.....	.....	.....	.....	.....
Hampton,		53,526	.....	.....	53,526	65	70	1	.....	.....	.....	.....	.....
Hyde Park,		49,515	.....	.....	49,515	134	26	.....	.....	.....	.....	.....	.....
		168,298	.....	.....	168,298	.....	154	1	.....	.....	.....	.....	.....
Totals,	.....	2,875,071	48,117	67,294	2,990,482	.....	6,538	18	47	3,735,025	252,693	1,287	401
Hudson Coal Co.													
Greenwood,	Lackawanna,	249,949	42,991	3,148	296,088	174	861	1	8	260,225	64,211	.....	111
Greenwood Washery,													

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Scranton Coal Co.													
Capouse,	Lackawanna,	191,033	23,500	2,801	217,334	180	540	1	3	226,300	20,000	.....	67
Peoples Coal Co.													
Oxford,	Lackawanna,	116,441	10,143	52,617	179,201	218	435	2	11	18,000	6,000	.....	61
South Side Coal Co.													
South Side Washery,	Lackawanna,	58,096	181	.....	58,277	229	48	.....	.....	.....	.....	.....	.....
Thorne-Neale Washery Co.													
Minooka Washery,	Lackawanna,	30,615	5,200	75	35,890	102	38	.....	.....	.....	.....	.....	1
Minooka Coal Co.													
Minooka,	Lackawanna,	16,836	.....	1,488	18,324	167	59	.....	1	13,755	1,650	.....	11
Carleton Coal Co.													
Carleton,	Lackawanna,	3,000	225	8,000	11,225	276	45	.....	.....	7,500	2,000	.....	4
East Mountain Coal Co.													
East Mountain,	Lackawanna,	702	2	780	1,484	54	24	.....	.....	875	.....	950	4
Grand totals,	.....	3,541,743	130,359	136,203	3,808,305	.....	8,588	22	70	4,261,680	346,554	2,237	663

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna,	33	1,610	18	2,920	4,530	.....	1	.....	97	92	15,347	19	15,185	8,316	7	4
Hudson Coal Co.,		15	423	10	1,800	2,223	.....	4	.....	.....	60	3,015	9	5,000	2,500	1	3
Scranton Coal Co.,		.....	.....	7	1,075	1,075	.....	.....	.....	.....	16	1,232	5	5,700	4,500	.....	1
Peoples Coal Co.,		.....	.....	5	1,500	1,500	1	.....	.....	.....	14	850	3	1,575	775	3	1
South Side Coal Co.,		.....	.....	2	160	160	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Thorne-Neale Washery Co.,		.....	.....	6	600	600	.....	.....	.....	.....	8	265	.....	.....	.....	.....	.....
Carleton Coal Co.,		1	40	.....	.....	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	.....	49	2,073	48	8,055	10,128	1	5	.....	97	190	20,709	36	27,460	16,091	11	9

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna,	15	8	46	1,741	1,922	270	143	41	401	828	5,415	....	13	60	76	265	22	28	659	1,123	6,538
Hudson Coal Co.,		2	1	3	249	235	119	....	3	36	6	654	....	2	16	40	...	33	1	115	207	861
Scranton Coal Co.,		1	1	3	138	118	80	12	5	....	91	449	....	1	8	11	9	9	1	52	91	540
Peoples Coal Co.,		1	2	2	100	132	44	10	3	40	....	334	1	1	7	9	20	4	6	53	101	435
South Side Coal Co.,		....	....	....	.....	.....	....	....	....	....	....	.....	2	2	....	2	8	....	2	32	48	48
Thorne-Neale Washery Co.,		....	....	....	.....	.....	....	....	....	....	....	.....	1	1	2	5	11	3	1	14	38	38
Minooka Coal Co.,		1	....	....	14	14	5	....	....	2	7	43	1	....	3	1	7	....	1	3	16	59
Carleton Coal Co.,		1	....	....	14	14	4	....	....	....	2	35	....	....	1	....	4	....	1	4	10	45
East Mountain Coal Co.,		1	....	....	6	6	1	....	....	....	1	15	....	....	1	....	4	....	1	3	9	24
Totals,	.....	22	12	54	2,262	2,441	523	165	52	479	935	6,945	5	20	98	144	328	71	42	935	1,643	8,588

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Delaware, Lackawanna and Western Railroad Co.	Lackawanna,	14	14	14	23	24	24	22	22	23	25	23	24	252
Hudson Coal Co.		16	13	11	16	14	15	15	14	14	15	15	16	174
Scranton Coal Co.		17	13	15	16	15	17	18	7	15	16	15	16	180
Peoples Coal Co.		20	21	20	18	17	17	19	18	16	17	18	17	218
Minooka Coal Co.		24	20	.....	.....	.....	.....	16	24	25	24	16	18	167
Carleton Coal Co.		22	23	25	23	25	23	19	22	24	22	25	23	276
East Mountain Coal Co.		.....	.....	.....	.....	.....	.....	.....	.....	.....	15	20	19	54

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Feb. 3	Louis Perroti, ...	Italian, ...	Dumpman, ...	47	M.	1	5	National, ...	Lackawanna,	Fatally burned on rock dump which was on fire. Outside.
25	John Sisko, ...	Polish, ...	Miner, ...	28	M.	1	4	National, ...		Instantly killed by explosion of blast at face of chamber.
26	Gustave Benson, ...	Swedish, ...	Miner, ...	58	M.	1	4	Bellevue, ...		Instantly killed by explosion of blast at face of chamber.
March 9	John Transere, ...	American, ...	Machinist, ...	30	M.	1	1	Bellevue, ...		Instantly killed by cars on slope.
April 11	John Sema, ...	Polish, ...	Miner, ...	48	M.	1	4	Sloan, ...		Fatally injured by fall of roof at face of chamber.
May 22	Alexander Carpinskie,	Polish, ...	Laborer, ...	22	S.	....	....	Dodge, ...		Instantly killed by fall of roof at face of chamber.
28	Gullip Alleard, ...	Polish, ...	Miner, ...	52	M.	1	8	Greenwood, ..		Killed by fall of roof on pillar work.
June 12	Frank Craven, ...	Greek, ...	Laborer, ...	37	M.	1	4	Holden, ...		Killed by explosion of blast at face of chamber.
19	Michael Docando, ...	Polish, ...	Miner, ...	45	M.	1	5	Archbald, ...		Fatally burned by explosion of powder in chamber.
22	George W. Thomas, ..	American, ...	Wiper, ...	18	S.	....	....	Dodge, ...		Killed by being struck by barrel that fell from top of breaker. Outside.
30	Silas Kittle, ...	American, ...	Inspector, ...	59	M.	1	....	Continental, .		Killed by railroad cars near breaker. Outside.
July 9	William Andrews, ...	English, ...	Miner, ...	50	M.	1	2	Archbald, ...		Killed by explosion of blast at face of chamber.
23	John Dalo, ...	Polish, ...	Miner, ...	28	S.	....	....	Bellevue, ...		Killed by fall of roof at face of chamber.
	John Burke, ...	Polish, ...	Laborer, ...	28	M.	1	1			
Sept. 3	Charles Smith, ...	Polish, ...	Miner, ...	47	M.	1	6	Bellevue, ...		Killed by explosion of blast at face of chamber.
	Frank Busbak, ...	Polish, ...	Miner, ...	48	M.	1	2			
28	William Hallman, ...	English, ...	Miner, ...	45	M.	1	2	Capouse, ...		Killed by fall of roof at face of chamber.
Oct. 5	John Galvanskie, ...	Polish, ...	Laborer, ...	22	S.	....	....	Oxford, ...		Killed by fall of roof at face of chamber.
11	James Baldwin, ...	American, ...	Electrician, ...	21	S.	....	....	Hampton, ...		Electrocuted in the power house. Outside.
Nov. 3	Dominick Koripus, ...	Lithuanian,	Laborer, ...	23	S.	....	....	Hyde Park, .		Instantly killed by fall of roof in chamber.
9	Alec. Kloos, ...	Russian, ...	Miner, ...	23	S.	....	....	Oxford, ...		Killed by fall of roof at face of chamber.
2	Joseph Pfeffer, ...	Lithuanian,	Miner, ...	50	M.	1	5	Hyde Park, .		Fatally burned by explosion of powder at face of chamber.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 26	Richard Morris,	American,	Company man,	44	M.	Capouse,		Head cut by fall of coal at face of chamber.
Feb. 3	Alec Kittan,	Polish,	Laborer,	22	S.	Holden,		Leg fractured by cars in chamber.
5	Anthony Siska,	Polish,	Laborer,	26	M.	National,		Skull fractured by explosion of blast at face of chamber.
March 10	Alfred Powell,	Welsh,	Flushman,	51	M.	Holden,		Leg fractured by cage in shaft.
11	Fred Sherman,	American,	Miner,	36	M.	Hyde Park,		Arm fractured by falling in chamber.
25	William Phillips,	American,	Doorboy,	17	S.	Sloan,		Hand lacerated in latches on gangway.
	John Mullem,	Irish,	Miner,	43	M.	Sloan,		Back bruised by explosion of blast at face of chamber.
31	William Howells,	Welsh,	Motorman,	35	M.	Hyde Park,		Jaw fractured by cars on gangway.
April 10	Toney Canboskie,	Italian,	Miner,	26	S.	Oxford,		Hands burned by explosion of powder at face of chamber.
11	John B. Owens,	American,	Foreman,	54	M.	National,		Head injured by explosion of blast in cross-cut.
14	Patrick Layman,	American,	Electrician,	27	M.	Holden,		Arm fractured by conveyor line on gangway.
17	Leo McAndrew,	Irish,	Driver,	26	S.	Oxford,	Lackawanna,	Hips injured by cars on gangway.
	Frank Smith,	Polish,	Runner,	21	S.	Oxford,		Fingers crushed by cars on gangway.
	Evan John,	Welsh,	Brakeman,	36	M.	Holden,		Ankle fractured by cars on gangway.
21	William Sherin,	American,	Miner,	47	S.	Continental,		Injured about body by explosion of blast at face of chamber.
	Edward Betzel,	American,	Laborer,	22	S.			
	Owen Coyel,	Irish,	Laborer,	29	S.			
	Patrick McHugh,	American,	Brakeman,	31	S.	Dodge,		Fingers amputated by cars on gangway.
May 4	Thomas Haddock,	Welsh,	Fire boss,	50	M.	Greenwood,		Leg bruised by explosion of blast in cross-cut.
20	Simon Stankoff,	Lithuanian,	Laborer,	32	S.	Hyde Park,		Hips squeezed by cars on gangway.
28	William Davis,	Welsh,	Driver,	24	M.	Oxford,		Shoulder fractured by pipe falling on him on gangway.
June 5	Daniel Morris,	American,	Motorman,	31	M.	Holden,		Head bruised by cars on gangway.
10	Walter Zuchloskie,	American,	Doorboy,	17	S.	Archbald,		Foot bruised by cars on gangway.
11	Anthony Arosa,	Italian,	Engineer,	54	M.	Hyde Park,		Three fingers amputated by machinery. Outside.
17	Frank Tobaskie,	Polish,	Laborer,	22	S.	Holden,		Hand lacerated by conveyor line in chamber.
18	Adam Slenapskie,	Polish,	Miner,	40	M.	Archbald,		Arms and face burned by explosion of powder in chamber.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
June	22 Thomas Warchinskie,.	Polish, ...	Miner, ...	30	M.	Oxford, ...	Lackawanna,	Spine injured by fall of roof at face of chamber.
	24 Michael Varack, ...	Polish, ...	Miner, ...	55	M.	Oxford, ...		Foot bruised by fall of roof at face of chamber.
July	5 William Morgan, ...	Welsh, ...	Miner, ...	56	M.	Holden, ...		Legs fractured by fall of roof at face of chamber.
	15 Yustin Zarawskie, ...	Polish, ...	Miner, ...	29	S.	Oxford, ...		Skull and pelvis fractured by explosion of blast at face of chamber.
	22 John Dierski, ...	Polish, ...	Laborer, ...	22	S.	Oxford, ...		Spine injured by fall of roof at face of chamber.
	25 Dominick Rushemis, ..	Lithuanian,	Miner, ...	29	M	Capouse, ...		Ankle fractured by cars in chamber.
	30 Frank Sluck, ...	Polish, ...	Miner, ...	33	M	Hyde Park, ...		Ankle fractured by fall of roof at face of chamber.
	31 Patrick Carthy, ...	Irish, ...	Miner, ...	39	S.	Oxford, ...		Arm fractured by explosion of blast at face of chamber.
Aug.	3 Thomas Thomas, ...	Welsh, ...	Miner, ...	52	M	Dodge, ...		Head bruised by explosion of blast at face of chamber.
	10 Arthur Parker, ...	American,...	Driver, ...	23	M	Greenwood, ...		Leg fractured by being kicked by mule on haulage road.
	13 John Bifko, ...	Hungarian,	Laborer, ...	31	M.	Dodge, ...		Foot crushed by coal-cutting machine at face of chamber.
	14 Frank Rudish, ...	Polish, ...	Laborer, ...	26	S.	Hyde Park, ...		Leg fractured by fall of roof at face of chamber.
	28 Stanley Mixsaw, ...	Polish, ...	Laborer, ...	30	M	Sloan, ...		Body bruised by explosion of blast in cross-cut.
Sept.	2 Thomas Diskin, ...	American,...	Miner, ...	40	M.	Greenwood, ...		Body burned by explosion of blast at face of chamber.
	5 Affelic Gerdies, ...	Italian, ...	Miner, ...	37	M	National, ...		Head burned by explosion of gas at face of chamber.
	9 Peter Gonsopie, ...	Polish, ...	Miner, ...	24	S.	Sloan, ...		Foot fractured by fall of roof at face of chamber.
	11 Peter Grozanowskie, ..	Lithuanian,	Laborer, ...	30	M.	Capouse, ...		Leg fractured by fall of coal at face of chamber.
	Frank Paploskie, ...	Polish, ...	Miner, ...	30	M.	Greenwood, ...		Head burned by explosion of blast at face of chamber.
	14 Peter Meis, ...	American,...	Motorman, ...	22	M.	Hyde Park, ...		Toes crushed by cars in chamber.

Sept.	28	Adolph Sepp, ...	Polish, ...	Miner, ...	56	M.	Greenwood, ...		Leg fractured by cars on gangway.
Oct.	5	George Tieoff, ...	Polish, ...	Miner, ...	30	M.	Oxford, ...		Leg fractured by fall of roof at face of chamber.
		Michael McGraw, ...	Irish, ...	Company man, ...	36	M.	Dodge, ...		Ankle bruised by being struck by rope on gangway.
	6	August Spruks, ...	German, ...	Miner, ...	32	M.	Minooka, ...		Leg fractured by cars on gangway.
	9	Ignatz Drungal, ...	Lithuanian,	Miner, ...	32	M.	Hyde Park, ...		Body bruised by fall of roof at face of chamber.
	10	Martin Ryder, ...	American,...	Company man, ...	51	S.	Bellevue, ...		Knee injured by being struck by pipe on gangway.
	20	Henry McCrea, ...	American,...	Runner, ...	20	S.	Bellevue, ...		Knee lacerated by cars on gangway.
Nov.	2	Marutre Pellegreme, ..	Italian, ...	Laborer, ...	27	M.	National, ...		Leg fractured by fall of roof at face of chamber.
	5	Albert Kallera, ...	American,...	Motorman, ...	18	S.	Hyde Park, ...		Arm burned by electricity in electric motor on gangway.
	6	David Rowlands, ...	Welsh, ...	Miner, ...	55	M.	Hyde Park, ...		Leg fractured by fall of coal at face of chamber.
	7	Martin Holleran, ...	Irish, ...	Miner, ...	50	M.	Greenwood, ...		Leg ractured by fall of roof at face of chamber.
	9	Fred Rudge, ...	English, ...	Laborer, ...	28	S.	Oxford, ...		Arm and leg bruised by fall of roof at face of chamber.
		Andrew Harion, ...	Polish, ...	Miner, ...	56	M.	Archbald, ...	Lackawanna,	Leg fractured by fall of coal at face of chamber.
	16	Cheslof Shanoskie, ...	Polish, ...	Laborer, ...	22	S.	Greenwood, ...		Leg ractured by fall of roof at face of chamber.
	18	Daniel Carter, ...	English, ...	Miner, ...	37	M.	Archbald, ...		Head bruised by fall of roof at face of chamber.
	24	Martin Heffeon, ...	American,...	Laborer, ...	34	S.	Hyde Park, ...		Leg lacerated by piece of coal sliding from car that he was loading at face of chamber.
	27	Goverick Novack, ...	Polish,.....	Miner, ...	29	S.	Greenwood, ...		Hands and face burned by explosion of powder in chamber.
	28	Edward Duggan, ...	American,...	Doorboy, ...	16	S.	Hyde Park, ...		Head and hips injured by fall of roof on gangway.
Dec.	4	John Musel, ...	German, ...	Brakeman, ...	30	S.	Bellevue, ...		Leg fractured by cars on gangway.
	11	Albert Yusachack, ...	Polish, ...	Laborer, ...	43	M.	Bellevue, ...		Knee injured by falling in chamber.
	16	Willard Neyer, ...	American,...	Brakeman, ...	18	S.	Holden, ...		Leg fractured by cars in chamber.
	19	Joseph Toastic, ...	Polish, ...	Laborer, ...	21	S.	Continental, ...		Leg fractured by being struck by piece of coal in chamber.
	21	Charles Kokulko, ...	Russian, ...	Laborer, ...	30	M.	Holden, ...		Leg fractured by fall of roof at face of chamber.
	31	Daniel Kumpo, ...	Polish, ...	Miner, ...	34	M.	Bellevue, ...		Face burned by explosion of blast at face of chamber.
		Gabriel Merchant, ..	Polish, ...	Laborer, ...	38	M.	Bellevue, ...		Hands burned by explosion of blast at face of chamber.

CONDITION OF COLLIERIES

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Bellevue, Sloan, Archbald, Hyde Park, National, Dodge, Holden and Continental.—Ventilation, drainage and condition as to safety, good.

HUDSON COAL COMPANY

Greenwood.—Ventilation, drainage and condition as to safety, good.

SCRANTON COAL COMPANY

Capouse.—Ventilation, drainage and condition as to safety, good.

PEOPLES COAL COMPANY

Oxford.—Ventilation, drainage and condition as to safety, good.

MINOOKA COAL COMPANY

Minooka.—Ventilation, drainage and condition as to safety, good.

CARLETON COAL COMPANY

Carleton.—Ventilation, drainage and condition as to safety, good.

EAST MOUNTAIN COAL COMPANY

East Mountain.—Ventilation, drainage and condition as to safety, good.

IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Bellevue Colliery.—Installed an 8 foot by 20 foot Vulcan ventilating fan, capacity 400,000 cubic feet to replace two small fans of the Guibal type, having a capacity of 300,000 cubic feet.

Holden.—Installed a new Jeffrey fan, size 6 by 18 feet capacity 225,000 cubic feet, over a new shaft sunk to the Rock vein, for the purpose of ventilating the Rock Top and Bottom Diamonds and Surface veins.

SCRANTON COAL COMPANY

Capouse.—Installed tail rope from the Four Foot vein, new tail rope around shaft in Four Foot vein, and endless rope around shaft

in Clark vein. Completed tunnel on grade from Four Foot to Five Foot vein, and second opening in Five Foot vein. Reopened Rock vein and timbered it. Started rock cogs under Main Avenue.

EAST MOUNTAIN COAL COMPANY

East Mountain Colliery.—Completed a new breaker, also office building, blacksmith shop and out-houses.

FIFTH DISTRICT

LACKAWANNA AND LUZERNE COUNTIES

Rendham, Pa., February 20, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit my report as Inspector of Mines for the Fifth Anthracite District, for the year ending December 31, 1914, as required by the Act of April 14, 1903.

Respectfully submitted,

AUGUSTUS McDADE, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	11
Number of mines,	31
Number of mines in operation,	30
Number of tons of coal shipped to market,	3,096,144
Number of tons used at mines for steam and heat,	256,033
Number of tons sold to local trade and used by employes,	49,679
Number of tons produced,	3,401,856
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	5,278
Number of persons employed outside,	1,626
Number of fatal accidents inside of mines,	15
Number of fatal accidents outside,	1
Number of non-fatal accidents inside of mines,	26
Number of non-fatal accidents outside,	4
Number of tons of coal produced per fatal accident inside,	226,790
Number of tons produced per fatal accident outside,	3,401,856
Number of tons produced per fatal accident inside and outside,	212,616
Number of persons employed per fatal accident inside,	352
Number of persons employed per fatal accident outside,	1,627
Number of persons employed per fatal accident inside and outside,	432
Number of persons employed per non-fatal accident inside,	203
Number of persons employed per non-fatal accident outside,	407
Number of persons employed per non-fatal accident inside and outside,	230
Number of wives made widows,	12
Number of children made orphans,	38
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	8
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	70
Number of electric motors used outside,	.....
Number of gasoline locomotives used inside,	.....
Number of fans in use,	21
Number of furnaces in use,	.....
Number of gaseous mines in operation,	14
Number of non-gaseous mines in operation,	16
Number of new mines opened,	.....
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Pennsylvania Coal Company,	1,408,670
Delaware, Lackawanna and Western Railroad Company,	1,159,140
Jermyn and Company,	527,895
Hillside Coal and Iron Company,	165,112
Hudson Coal Company,	117,070
Lehigh Valley Coal Company,	23,969
Total,	3,401,856

Production by Counties

Lackawanna,	2,596,503
Luzerne,	805,353
Total,	3,401,856

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Pennsylvania Coal Co.,	7	1	8	4	2	6	201,239	352,167	2,226	869	3,035	318	809	556	404
Delaware, Lackawanna and Western Railroad Co.,	7	.....	7	7	1	8	165,591	165,591	1,752	427	2,179	250	.....	250	427
Jermyn and Co.,	.....	.....	.....	10	1	11	.....	52,789	768	189	957	.....	.....	77	189
Hudson Coal Co.,	1	.....	1	5	.....	5	117,070	23,414	215	78	293	215	.....	43	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	317	123	440	.....	.....	.....	.....
Totals and averages,	15	1	16	26	4	30	226,790	130,840	5,278	1,626	6,904	352	1,627	203	467

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	1	....	....	1	....	....	....	....	....	....	....	....	2	13.33
Falls of roof,	....	....	1	2	....	3	1	....	1	....	....	....	8	53.33
Mine cars,	....	....	....	1	....	....	....	1	....	....	....	....	2	13.33
Explosions of powder and dynamite,	1	....	....	....	....	....	....	....	....	....	....	....	1	6.67
Blasts, premature and otherwise,	....	....	....	....	....	1	....	....	....	1	....	....	2	13.34
Totals,	2	....	1	4	....	4	1	1	1	1	....	....	15	100.00
Outside														
Burned by hot ashes,	....	....	....	....	....	....	....	....	....	1	....	....	1	100.00
Totals,	....	....	....	....	....	....	....	....	....	1	....	....	1	100.00
Grand totals inside and outside,	2	....	1	4	....	4	1	1	1	2	....	....	16	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	1	....	....	....	....	....	....	....	....	2	....	1	4	15.38
Falls of roof,	....	2	1	3	2	1	2	....	1	....	1	....	13	50.00
Mine cars,	1	1	1	1	1	....	1	....	....	....	....	....	6	23.08
Struck by piece of timber,	....	....	....	....	....	....	....	....	....	....	1	....	1	3.85
Struck by piece of rock,	....	....	....	....	....	....	1	....	....	....	....	....	1	3.85
By falling,	....	1	....	....	....	....	....	....	....	....	....	....	1	3.84
Totals,	2	4	2	4	3	1	4	....	1	2	2	1	26	100.00
Outside														
Burned by hot ashes,	....	....	....	....	....	....	....	....	....	2	....	....	2	50.00
By falling,	....	....	....	....	....	....	1	....	....	....	....	....	1	25.00
By jumping,	....	....	....	....	1	....	....	....	....	....	....	....	1	25.00
Totals,	....	....	....	....	1	....	1	....	....	2	....	....	4	100.00
Grand totals inside and outside,	2	4	3	4	4	1	5	....	1	4	2	1	30	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2	....	1	1	....	3	1	....	1	1	....	....	10
Miners' laborers,	....	....	....	2	....	1	....	....	....	....	....	....	3
Doorboys and helpers,	....	....	....	....	....	....	....	1	....	....	....	....	1
Slopetenders,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	2	....	1	4	....	4	1	1	1	1	....	....	15
Outside													
Bankmen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	....	....	....	....	....	....	....	....	....	1	....	....	1
Grand totals, inside and outside,	2	....	1	4	....	4	1	1	1	2	....	....	16

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants,	....	....	....	....	1	....	....	....	....	....	....	....	1
Miners,	1	....	1	2	....	1	3	....	1	1	1	1	12
Miners' laborers,	1	2	....	2	1	....	....	....	....	1	....	....	7
Drivers and runners,	....	2	1	....	1	....	....	....	....	....	1	....	5
Masons,	....	....	....	....	....	....	1	....	....	....	....	....	1
Totals,	2	4	2	4	3	1	4	....	1	2	2	1	26
Outside													
Bankmen,	....	....	....	....	....	....	....	....	....	2	....	....	2
Runners,	....	....	....	....	....	....	1	....	....	....	....	....	1
Picker-tenders,	....	....	....	....	1	....	....	....	....	....	....	....	1
Totals,	....	....	....	....	1	....	1	....	....	2	....	....	4
Grand totals, inside and outside,	2	4	2	4	4	1	5	....	1	4	2	1	30

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	....	1	....	....	....	....	....	....	....	....	1
Irish,	1	....	....	....	....	....	....	....	....	....	....	....	1
Polish,	1	....	1	2	....	1	1	1	....	1	....	....	8
Italian,	....	....	....	....	....	1	....	....	....	1	....	....	2
Lithuanian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Austrian,	....	....	....	....	....	....	....	....	1	....	....	....	1
Russian,	....	....	....	....	....	2	....	....	....	....	....	....	2
Totals,	2	....	1	4	....	4	1	1	1	2	....	....	16

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	1	....	....	2	....	....	....	....	1	1	....	5
English,	....	....	....	....	....	....	....	....	....	1	....	....	1
German,	....	....	1	....	....	....	....	....	....	....	....	....	1
Polish,	1	1	....	3	1	....	1	....	1	....	....	....	8
Italian,	....	1	1	....	....	....	2	....	....	....	1	1	6
Slavonian,	....	....	....	....	....	1	....	....	....	....	....	....	1
Lithuanian,	....	....	....	....	....	....	1	....	....	....	....	....	1
Russian,	....	1	....	1	1	....	....	....	....	2	....	....	5
Greek,	....	....	....	....	....	....	1	....	....	....	....	....	1
Swedish,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	2	4	2	4	4	1	5	....	1	4	2	1	30

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Pennsylvania Coal Co.																
Old Forge Colliery:																
Old Forge No. 1, ...	Shaft,.....	Non-gas.,.	Fan, ...	17	4.6	4.6	24	.2		Steam,.....	..	2	19,800	18,200	22,500	27
Old Forge No. 1, ...	Slope,.....	Non-gas.,.	Fan, ...	20	6.6	5.5	52	.9		Steam,.....	..	5	64,800	62,100	69,500	148
Old Forge No. 2, ...	Shaft,.....	Non-gas.,.	Fan, ...	20	6.6	5.5	55	1.		Electricity,	..	4	80,480	73,450	90,880	140
Mountain Drift (Marcy Vein), ...	Drift, ...	Non-gas.,.	Fan, ...	20	6.6	5.5	59	1.		Electricity,	..	10	144,300	127,225	159,005	524
Mountain Drift (Clark Vein), ...	Drift, ...	Non-gas.,.														
Coray, ...	Slope,.....	Non-gas.,.	Fan, ...	14	4	4	70	.5	Guibal,	Electricity,	..	..	36,100	31,240	37,200	88
Central Colliery:																
Laws, ...	Shaft,.....	Gaseous, ..	Fan, ...	20	6.6	5.5	50	.5		Steam,.....	..	8	107,050	96,080	123,090	280
Laws, ...	Slope,.....	Non-gas.,.														
No. 13, ...	Shaft,.....	Gaseous,..	Fan, ...	20	6.6	5.5	60	.6		Steam,.....	..	2	32,680	30,040	37,090	82
Sibley Colliery:																
Sibley, ...	Shaft,....	Non-gas.,.	Fan, ...	20	6.	5.	70	1.5		Steam,.....	.	13	135,990	132,675	149,590	590
Delaware, Lackawanna and Western Railroad Co.																
Taylor Colliery:																
Taylor, ...	Shaft,.....	Gaseous, ..	Fan, ...	25	8	7	60	1.	Guibal, ..	Steam,.....	..	10	275,490	211,390	308,510	699
Taylor, ...	Slope,....	Gaseous, ..														
Pyne Colliery:																
Pyne, ...	Shaft,.....	Gaseous, ..	Fan, ...	16	5	4.6	90	1.	Guibal, ..	Steam,.....	..	2	29,600	28,400	32,700	654
Pyne, ...	Slope,.....	Gaseous, ..	Fan, ...	24	8	6	72	2.3	Guibal, ..	Steam,.....	..	8	188,300	155,600	223,200	

Halstead Colliery:																
Halstead,	Shaft,	Gaseous,	Fan,	18	4	6.4	114	1.8	Guibal,	Steam,		1	9,230	8,420	22,000	399
Halstead,	Drift,	Gaseous,	Fan,	12	3.6	3.	56	.6				9	115,011	106,700	120,300	
Jermyn and Co. Jermyn Colliery:																
No. 1,	Shaft,	Gaseous,	Fan,	14	4.6	4.	90	1.1				5	92,800	*	117,900	
No. 1,	Slope,	Gaseous,														
No. 2,	Shaft,	Gaseous,	Fan,	14	4.3	6.	90	1.	Guibal,	Steam,		6	103,600	*	123,300	768
No. 2,	Slope,	Non-gas.,														
No. 3,	Shaft,	Gaseous,	Fan,	18	4.6	4.	53	.8				2	70,600	*	105,000	
No. 3,	Slope,	Gaseous,	Fan,	10	4.	3.?	84	.3				2	21,600	*	28,800	
Hillside Coal and Iron Co. Consolidated Colliery:																
Consolidated,	Slope,	Non-gas.,	Fan,	14	4.	4.	85	.6	Guibal,	Steam,	..	5	44,300	44,100	45,263	275
Consolidated,	Drift,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	17,200	*	19,800	
Hudson Coal Co. Langcliffe Colliery:																
Langcliffe,	Shaft,	Non-gas.,	Fan,	17	5.	6.	60	.4	Guibal,	Steam,	..	1	21,300	19,250	24,100	
No. 1,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	15,600	14,800	16,800	
No. 2,	Drift,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	15,800	14,600	17,400	215
No. 3,	Drift,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	14,860	*	*	
Moosic,	Shaft,	Gaseous,	Fan,	10	4.	4.	90	.1	Guibal,	Steam,	..	1	19,850	15,450	21,700	
Lehigh Valley Coal Co. Austin Colliery:																
Austin,	Drift,	Non-gas.,	Fan,	8	3.	2.	120	.3	Guibal,	Electricity,	..	1	17,500	14,000	18,250	42

*Robbing pillars.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Pennsylvania Coal Co.						
Old Forge,	Lackawanna,	Joseph P. Jennings,	Scranton,	John W. Reid,	Moosic,	Erie
Central,	Luzerne,					
Sibley,	Lackawanna,					
Delaware, Lackawanna and Western Railroad Co.						
Taylor,	Lackawanna,	C. E. Tobey,	Scranton,	David Lloyd,	Scranton,	D. L. and W.
Pyne,	Lackawanna,			T. J. Williams,		
Halstead,	Luzerne,			David Lloyd,		
Taylor Washery,	Lackawanna,			David Lloyd,		
Jermyn and Co.						
Jermyn,	Lackawanna,	E. B. Jermyn,	Scranton,	John P. Corcoran,	Old Forge,	Erie
Jermyn Washery,						
Hillside Coal and Iron Co.						
Consolidated,	Luzerne,	Joseph P. Jennings,	Scranton,	John W. Reid,	Moosic,	Erie
Hudson Coal Co.						
Langcliffe,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettebone,	Dorranceton,	D. and H.
Lehigh Valley Coal Co.						
Austin,	Lackawanna,	F. M. Chase,	Wilkes-Barre,	Thomas Thomas,	Wilkes-Barre,	Lehigh Valley
Moosic Coal Co.						
Moosic,*	Lackawanna,	John F. Cotter,	Wyoming,	William Cotter,	Minooka,	Erie

*Idle.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Pennsylvania Coal Co.													
Old Forge,	Lackawanna,	759,378	58,276	.....	817,654	291	1,432	4	2	681,675	20,070	.....	4
Central,	Luzerne,	356,392	28,167	108	384,667	291	809	4	2	315,575	3,099	10,075	42
Sibley,	Lackawanna,	164,729	34,850	6,770	206,349	272	794	.....	2	408,375	49,488	350	51
Totals,		1,280,499	121,293	6,878	1,408,670	.....	3,035	8	6	1,405,625	72,657	10,425	97
Delaware, Lackawanna and Western Railroad Co.													
Taylor,	Lackawanna,	485,613	18,400	8,032	512,045	265	841	2	1	492,775	6,490	6,075	28
Pyne,	Lackawanna,	466,024	19,114	2,522	487,660	263	817	4	5	383,275	3,191	.....	76
Halstead,	Luzerne,	110,438	25,513	2,553	138,504	247	509	1	2	139,425	52,899	.....	74
		1,062,075	63,027	13,107	1,138,209	258	2,167	7	8	1,015,475	62,580	6,075	178
Taylor Washery,	Lackawanna,	20,931	.....	.....	20,931	193	12	.....	.....	.....	.....	.....	.....
Totals,		1,083,006	63,027	13,107	1,159,140	.....	2,179	7	8	1,015,475	62,580	6,075	178
Jermyn and Co.													
Jermyn,	Lackawanna,	375,065	.....	11,562	386,627	270	934	.....	11	494,125	48,560	.....	77
Jermyn Washery,	Lackawanna,	90,018	45,115	6,135	141,268	270	23	.....	.....	.....	.....	.....	.....
Totals,		465,083	45,115	17,697	527,895	.....	957	.....	11	494,125	48,560	.....	77

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Hillside Coal and Iron Co. Consolidated, ...	Luzerne,.....	140,256	15,760	9,096	165,112	267	391	.....	.....	163,000	7,345	.....	34
Hudson Coal Co. Langcliffe, ...	Luzerne,.....	103,331	10,838	2,901	117,070	157	293	1	5	71,100	3,004	.....	60
Lehigh Valley Coal Co. Austin, ...	Lackawanna, ..	23,969	.....	.....	23,969	*	49	.....	.....	3,250	150	.....	12
Grand totals, ...	.....	3,096,144	256,033	49,679	3,401,856	.....	6,904	16	30	3,152,575	194,296	16,500	458

*Coal is prepared through William A. Breaker, 8th District

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Pennsylvania Coal Co.,	Lackawanna,	....	.....	52	6,800	6,800	....	5	....	42	72	6,590	27	24,200	9,300	4	3
	Luzerne,																
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna,	19	760	26	4,595	5,355	....	1	....	28	45	3,489	9	11,220	4,900	3	....
	Luzerne,																
Jermyn and Co.,	Lackawanna,	.....	.....	4	2,000	2,000	....	....	....	....	25	1,959	2	10,000	7,000	1	....
Hillside Coal and Iron Co.,	Luzerne,	.....	.....	12	900	900	....	2	....	....	14	850	2	1,000	500	....	1
Hudson Coal Co.,	Luzerne,	.....	.....	6	735	735	....	....	....	....	24	762	3	2,700	1,000	1	1
Lehigh Valley Coal Co.,	Lackawanna,	.....	.....	.....	.....	.....	....	....	....	....	2	32	1	500	500	....	....
Totals,		19	760	100	15,030	15,790	....	8	....	70	182	13,682	44	49,620	23,200	9	5

TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Pennsylvania Coal Co.,	Lackawanna, ... Luzerne, ...	5	14	3	833	852	63	58	14	261	123	2,226	1	3	61	47	194	55	7	441	809	3,035
Delaware, Lackawanna and Western Railroad Co.	Luzerne, ... Lackawanna, ...	4	3	15	550	599	133	27	18	126	277	1,752	....	5	20	47	126	3	11	215	427	2,179
Jermyn and Co., ...	Lackawanna, ...	2	2	14	265	271	82	6	5	121	....	768	2	2	8	20	43	31	6	77	189	957
Hillside Coal and Iron Co., ...	Luzerne, ...	2	....	....	108	108	27	3	....	15	12	275	....	1	10	10	25	2	1	67	116	391
Hudson Coal Co., ...	Luzerne, ...	2	....	1	63	99	31	....	1	16	2	215	....	1	7	17	6	9	2	36	78	293
Lehigh Valley Coal Co.	Lackawanna, ...	1	....	....	13	13	6	....	1	8	....	42	....	....	2	....	....	....	....	5	7	49
Totals, ...	.....	16	19	33	1,832	1,942	342	94	39	547	414	5,278	3	12	108	141	394	100	27	841	1,626	6,904

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Pennsylvania Coal Co.,	Luzerne,	25	20	23	23	25	25	25	25	24	25	20	25	285
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna, Luzerne,	14	18	19	21	24	25	24	22	19	25	23	24	258
Jermyn and Co.,	Lackawanna,	24	22	23	21	24	23	24	23	22	23	21	20	270
Hillside Coal and Iron Co.,	Luzerne,	22	19	22	22	24	25	25	22	21	23	18	24	267
Hudson Coal Co.,	Luzerne,	14	14	10	13	13	12	13	12	12	13	15	16	157

TABLE 4.—Fatal accidents inside and outside of mines

Date		Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan.	20	Alec Brigadeer, ...	Polish, ...	Miner, ...	26	M.	1	3	Pyne, ...	Lackawanna, ..	Killed by explosion of dynamite at face of chamber.
	24	Anthony Clifford, ...	Irish, ...	Miner, ...	55	M.	1	5	Central, ...	Luzerne,.....	Killed by fall of coal at face of chamber.
March	27	John Kokvalsick, ...	Polish, ...	Miner, ...	43	S.	....	....	Old Forge, ...	Lackawanna, ..	Killed by fall of roof at face of pillar.
April	14	John Kupluska, ...	Polish, ...	Miner, ...	50	M.	1	2	Halstead, ...	Luzerne,.....	Killed by fall of roof at face of chamber.
	24	John Dominick, ...	Polish, ...	Laborer, ..	40	M.	1	3	Pyne, ...	Lackawanna, ..	Killed by fall of coal at face of chamber.
	25	Wassil Lukian, ...	Lithuanian,	Laborer, ..	38	M.	1	4	Taylor, ...	Lackawanna, ..	Killed by fall of roof in chamber.
		Reese Thomas, ...	American, ..	Slope-tender	20	S.	...	....	Pyne, ...	Lackawanna, .	Killed by cars on slope.
June	8	Peter Poetz, ...	Italian, ...	Miner, ...	31	M.	1	3	Old Forge, ...	Lackawanna, ..	Killed by explosion of blast 30 feet from face of chamber.
	13	Michael Lazonick, ..	Russian, ...	Miner, ...	34	M.	1	5	Langcliffe, ...	Luzerne,.....	Killed by fall of roof 19 feet from face of chamber.
	22	John Pachicka, ...	Polish, ...	Miner, ...	40	M.	1	2	Central, ...	Luzerne,.....	Killed by fall of roof at face of pillar.
		John Procup, ...	Russian, ...	Laborer, ..	38	M.	1	3			
July	13	John Camon, ...	Polish, ...	Miner, ...	27	M.	1	2	Old Forge, ...	Lackawanna, ..	Killed by fall of roof on pillar work.
Aug.	20	Frank Deres, ...	Polish, ...	Doorboy, ..	17	S.	...	....	Old Forge, ...	Lackawanna, ..	Neck broken by cars at entrance to abandoned chamber.
Sept.	26	Wasil Brisnock, ...	Austrian, ...	Miner.	32	M.	1	1	Taylor, ...	Lackawanna, ..	Killed by fall of roof at face of chamber.
Oct.	14	Frank Karkikowskie,	Polish, ...	Miner, ...	31	M.	1	5	Pyne, ...	Lackawanna, ..	Killed by explosion of blast 50 feet from face of chamber.
	26	Nick Pampi, ...	Italian, ...	Bankman,	22	S.	...	..	Central, ...	Luzerne,.....	Fatally burned. The ash bank was on fire, and he placed the hose on a rack in such position that the water would undermine top of bank. He then retired to a place where he thought he was safe, but a slide occurred and the wind blew the hot ashes around him. Two other men were slightly burned. Outside.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 12	John Lush, ...	Polish, ...	Laborer, ...	25	S.	Pyne, ...	Lackawanna, ..	Ribs fractured by cars in chamber.
20	Jacob Ruef, ...	Swedish,....	Miner, ...	60	M.	Pyne, ...	Lackawanna, ..	Leg fractured by fall of coal in chamber.
Feb. 3	Joseph Seskofskie, ..	Polish, ...	Laborer, ...	20	S.	Langcliffe, ...	Luzerne,.....	Leg fractured by fall of roof in chamber.
11	Patrick Pottilla, ...	Italian,.....	Driver, ...	18	S.	Jermyn, ...	Lackawanna, ..	Leg fractured by cars on gangway.
13	Stanley Weresky, ...	Russian, ...	Laborer, ...	45	M.	Jermyn, ...	Lackawanna, ..	Leg and collar bone fractured by fall of roof at face of chamber.
23	Michael Gyke, ...	American,..	Driver, ...	17	S.	Halstead, ...	Luzerne,.....	Arm fractured by falling on gangway.
March 17	Casper Stalley, ...	German,....	Miner, ...	58	M.	Taylor, ...	Lackawanna, ..	Scalp lacerated by fall of roof at face of chamber.
20	Peter Casterline, ...	Italian,.....	Runner, ...	19	S.	Jermyn, ...	Lackawanna, ..	Collar bone fractured by cars on gangway.
April 3	Anthony Mascavage,	Polish, ...	Miner, ...	33	M.	Langcliffe, ...	Luzerne,.....	Hip dislocated by cars in chamber.
17	John Gaul, ...	Polish, ...	Miner, ...	39	M.	Pyne, ...	Lackawanna, ..	Arm fractured by fall of roof on pillar work.
	Toney Wanchock, ...	Polish, ...	Laborer, ...	50	S.	Jermyn, ...	Lackawanna, ..	Arm fractured by fall of roof at face of chamber.
29	Joseph Benco, ...	Russian,....	Laborer, ...	26	S.	Jermyn, ...	Lackawanna, ..	Spine injured by fall of roof in chamber.
May 1	Michael McNulty, ..	American,..	Fire boss, ...	42	M.	Jermyn, ...	Lackawanna, ..	Leg fractured by fall of roof at face of chamber.
4	Alec Huber, Jr., ...	American,..	Picker-tender, ...	26	M.	Pyne, ...	Lackawanna, ..	Arm fractured by jumping in breaker. Outside.
19	Anthony Gruska, ...	Polish, ...	Laborer, ...	38	S.	Langcliffe, ...	Luzerne,.....	Leg and arm fractured by fall of roof at face of chamber.
25	James Mooney, ...	Russian,....	Runner, ...	30	M.	Halstead, ...	Luzerne,.....	Leg fractured by cars in chamber.
June 22	Andrew Wolf, ...	Slavonian, .	Miner, ...	25	S.	Sibley, ...	Lackawanna, ..	Leg fractured by fall of roof at face of chamber.
July 2	John Jaddick, ...	Greek,.....	Runner, ...	28	M.	Jermyn, ...	Lackawanna, ..	Collar bone fractured by falling from railroad car. Outside.
10	Joseph Volanty, ...	Lithuanian,	Miner, ...	44	M.	Langcliffe, ...	Luzerne,.....	Body injured by fall of roof at face of chamber.
24	Joseph Palmero, ...	Italian,.....	Mason, ...	67	M.	Jermyn, ...	Lackawanna, ..	Hand bruised by cars on gangway.
27	Andrew Chiro, ...	Polish, ...	Miner, ...	52	M.	Jermyn, ...	Lackawanna, ..	Leg fractured by piece of rock sliding from gob in chamber.
	Peter Stock, ...	Italian,.....	Miner, ...	51	M.	Jermyn, ...	Lackawanna, ..	Leg fractured by fall of rock at face of chamber.
Sept. 15	John Bacum, ...	Polish.....	Miner, ...	34	M.	Sibley, ...	Lackawanna, ..	Back broken by fall of roof at face of chamber.

TABLE 5—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 9	Henry Strein, ...	American, ..	Miner, ...	34	S.	Pyne, ...	Lackawanna, ..	Seriously injured by fall of coal at face of chamber.
14	Rufus Wylam, ...	English, ...	Laborer, ...	20	S.	Old Forge, ...	Lackawanna, ..	Head bruised by fall of coal on pillar work.
26	John Frank, ...	Russian, ...	Bankman, ...	23	M.	Central, ...	Luzerne, ...	Face and hands burned. A slide occurred on ash bank, which was on fire, and the wind blew the hot ashes around them. Outside.
	Michael Pervit, ...	Russian, ...	Bankman, ...	40	M.			
Nov. 23	Alfred Richards, ...	American, ..	Runner, ...	23	M.	Langcliffe, ...	Luzerne, ...	Skull fractured by being struck by prop that fell from a car on slope.
25	Joseph Sknel, ...	Italian, ...	Miner, ...	44	M.	Jermyn, ...	Lackawanna, ..	Three toes smashed by fall of roof at face of chamber.
Dec. 12	Joseph Risina, ...	Italian, ...	Miner, ...	24	S.	Old Forge, ...	Lackawanna, ..	Leg fractured by fall of coal at face of chamber.

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Old Forge.—Ventilation, drainage and condition as to safety, good. Mining pillars.

Central.—Ventilation, drainage and general condition, good. Mining pillars.

Sibley.—Ventilation, drainage and condition as to safety good. Pillars are being mined. There has been a marked improvement in a general way in this colliery since it was purchased by the Pennsylvania Coal Company.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Taylor.—Ventilation, drainage and condition as to safety, good. Mining pillars.

Pyne.—Ventilation, drainage and condition as to safety, good. Mining pillars.

Halstead.—Ventilation, drainage and condition as to safety, fair. Mining pillars.

JERMYN AND COMPANY

Jermyn.—Ventilation, drainage and condition as to safety, good. Mining pillars extensively.

HILLSIDE COAL AND IRON COMPANY

Consolidated.—Ventilation, drainage and general condition as to safety, good. Pillars are being mined.

HUDSON COAL COMPANY

Langcliffe.—Ventilation, drainage and condition as to safety, good. Mining pillars.

LEHIGH VALLEY COAL COMPANY

Austin.—Ventilation, drainage and condition as to safety, fair. Mining pillars almost exclusively.

MOOSIC COAL COMPANY

Moosic.—Ventilation, drainage and condition as to safety, good. Idle the entire year.

IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

Old Forge Colliery.—An addition of 30 feet has been built to the power house and 2 exhaust steam turbines have been installed to furnish additional electric power. Additional troughs have been placed in the breaker from the various parts of the machinery to the dust fan, to take care of the breaker dust. Overwinding safety devices have been placed on the engines at Nos. 1 and 2 shafts. Work has been started on the sinking of a slope near Old Forge No. 2

shaft to the Clark vein. A new fireproof motor barn has been built near the foot of No. 1 shaft. A new and large hospital has also been made on the inside at this place. At Coray slope a fireproof motor barn and a fireproof hospital have been placed in the Clark vein.

Central Colliery.—Overwinding devices have been placed on the engines at Laws and No. 13 shafts.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Taylor Colliery.—Installed one 1,500 gallon centrifugal pump, for the purpose of pumping water from Clark vein to surface. Tunnel driven from Rock vein to bottom split of Diamond vein. Air shaft sunk from Clark to No. 1 Dunmore vein, for the purpose of ventilating Dunmore vein. Brick and concrete washhouse with steel lockers, erected on the outside.

Halstead Colliery.—Re-opening Nos. 2 and 3 Dunmore veins. Rock tunnel made from Clark to Marcy vein. Re-cribbed Feeder Dam shaft. Slope made from surface to Marcy vein. Built new reservoir for Feeder Dam shaft, to replace old one.

JERMYN AND COMPANY

Jermyn Colliery.—Installed 3 electric pumps. Concreted No. 3 shaft and fanway.

SIXTH DISTRICT

LUZERNE COUNTY

Pittston, Pa., February 26, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the Sixth Anthracite District, for the year ending December 31, 1914.

Respectfully submitted,

H. McDONALD, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	16
Number of mines,	41
Number of mines in operation,	41
Number of tons of coal shipped to market,	5,144,084
Number of tons used at mines for steam and heat,	459,380
Number of tons sold to local trade and used by employes,	60,676
Number of tons produced,	5,664,140
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	10,457
Number of persons employed outside,	2,894
Number of fatal accidents inside of mines,	42
Number of fatal accidents outside,	3
Number of non-fatal accidents inside of mines,	62
Number of non-fatal accidents outside,	7
Number of tons of coal produced per fatal accident inside,	134,860
Number of tons produced per fatal accident outside,	1,888,047
Number of tons produced per fatal accident inside and outside,	125,869
Number of persons employed per fatal accident inside,	249
Number of persons employed per fatal accident outside,	964
Number of persons employed per fatal accident inside and outside,	297
Number of persons employed per non-fatal accident inside,	168
Number of persons employed per non-fatal accident outside,	413
Number of persons employed per non-fatal accident inside and outside,	194
Number of wives made widows,	24
Number of children made orphans,	57
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	25
Number of compressed air locomotives used inside,	12
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	75
Number of electric motors used outside,	.....
Number of gasoline locomotives used inside,	.....
Number of fans in use,	44
Number of furnaces in use,	.....
Number of gaseous mines in operation,	23
Number of non-gaseous mines in operation,	18
Number of new mines opened,	2
Number of old mines abandoned,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Pennsylvania Coal Company,	3,083,167
Hudson Coal Company,	692,191
Hillside Coal and Iron Company,	684,929
Lehigh Valley Coal Company,	561,230
Delaware and Hudson Company,	317,649
Traders Coal Company,	159,807
Wilkes-Barre Colliery Company,	147,228
McCauley Coal Company,	10,262
Central Coal Company,	4,612
John Conlon Coal Company,	3,065
Total,	5,664,140

Production by Counties

Luzerne,	5,664,140

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Pennsylvania Coal Co.,	22	.....	22	22	2	24	140,144	140,144	5,608	1,591	7,199	255	.....	255	795
Hudson Coal Co.,	7	2	9	16	1	17	98,884	43,262	1,438	348	1,786	205	174	90	348
Hillside Coal and Iron Co.,	3	.....	3	4	1	5	228,309	171,232	1,401	401	1,802	467	.....	350	401
Lehigh Valley Coal Co.,	4	1	5	8	1	9	140,307	70,154	786	224	1,010	196	224	98	224
Delaware and Hudson Co.,	3	.....	3	5	1	6	105,883	63,530	555	146	701	185	.....	111	146
Traders Coal Co.,	1	.....	1	1	.....	1	159,807	159,807	331	73	404	331	.....	331	.....
Wilkes-Barre Colliery Co.,	2	.....	2	5	.....	5	73,614	29,445	215	58	273	107	.....	43	.....
McCauley Coal Co.,	.....	.....	.....	1	1	2	.....	10,262	29	15	44	.....	.....	29	15
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	94	38	132	.....	.....	.....	.....
Totals and averages,	42	3	45	62	7	69	134,860	91,357	10,457	2,894	13,351	249	964	168	413

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	1	....	....	1	....	2	....	....	1	5	11.92
Falls of roof,	1	....	2	1	1	2	3	1	2	2	1	....	16	38.02
Mine cars,	....	....	....	....	2	....	....	....	....	2	1	....	5	11.91
Explosions of gas,	1	....	....	....	1	....	....	....	....	....	....	....	2	4.76
Blasts, premature and otherwise,	1	1	1	1	....	....	3	1	....	....	1	....	9	21.44
Falling into shafts,	....	....	....	....	....	....	....	....	....	....	....	1	1	2.39
Struck by rock,	....	....	....	....	....	1	....	....	....	....	....	....	1	2.39
Struck by timber,	....	....	....	....	....	....	....	....	1	....	....	....	1	2.39
Struck by lever,	....	....	....	....	....	....	....	....	1	....	....	....	1	2.39
Electricity,	....	....	....	....	....	....	....	1	....	....	....	....	1	2.39
Totals,	3	1	3	3	4	3	7	3	6	4	3	2	42	100.00
Outside														
Cars,	....	....	....	....	....	....	....	1	....	....	....	....	1	33.34
Machinery,	1	....	....	1	....	....	....	....	....	....	....	....	2	66.66
Totals,	1	....	....	1	....	....	....	1	....	....	....	....	3	100.00
Grand totals inside and outside,	4	1	3	4	4	3	7	4	6	4	3	2	45	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	1	1	....	....	....	....	....	....	1	3	4.84
Falls of roof,	3	3	3	....	3	1	3	....	4	1	....	1	22	35.48
Mine cars,	....	1	1	3	3	....	2	2	....	....	1	2	15	24.19
Explosions of gas,	1	1	....	....	2	....	....	....	....	....	....	....	4	6.45
Explosions of powder and dynamite,	2	....	....	....	....	....	....	1	....	....	....	....	3	4.83
Blasts, premature and otherwise,	....	....	....	....	2	....	2	2	1	2	1	1	11	17.75
Mules,	....	1	....	....	....	....	....	....	....	....	....	....	1	1.62
Struck by rope,	....	1	....	1	1	....	....	....	....	....	....	....	3	4.84
Totals,	6	7	4	5	12	1	7	5	5	3	2	5	62	100.00
Outside														
Cars,	....	....	....	....	....	1	....	....	....	....	....	....	1	14.28
Machinery,	....	....	....	1	....	....	....	....	....	....	....	....	1	14.29
Burned by steam,	....	....	....	....	....	....	1	....	....	....	....	....	1	14.29
Falling,	....	....	....	....	1	....	....	....	....	1	....	....	2	28.57
Struck by iron,	....	....	....	1	....	1	....	....	....	....	....	....	2	28.57
Totals,	....	....	....	2	1	2	1	....	....	1	....	....	7	100.00
Grand totals inside and outside,	6	7	4	7	13	3	8	5	5	4	2	5	69	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2	1	3	1	....	1	6	2	3	1	....	....	20
Miners' laborers,	....	....	....	1	1	2	1	1	3	1	2	2	14
Drivers and runners,	....	....	....	....	1	....	....	....	....	....	1	....	2
Footmen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Trackmen,	....	....	....	1	....	....	....	....	....	....	....	....	1
Company men,	1	....	....	....	2	....	....	....	....	....	....	....	3
Doormen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	3	1	3	3	4	3	7	3	6	4	3	2	42
Outside													
Slatepickers (boys),	1	....	....	....	....	....	....	....	....	....	....	....	1
Drivers,	....	....	....	....	....	....	....	1	....	....	....	....	1
Laborers,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	1	....	....	1	....	....	....	1	....	....	....	....	3
Grand totals inside and outside,	4	1	3	4	4	3	7	4	6	4	3	2	45

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	4	2	3	1	5	1	6	2	2	2	1	....	29
Miners' laborers,	2	3	1	2	4	....	....	1	3	1	1	3	21
Drivers and runners,	....	2	....	2	2	....	1	2	....	....	....	2	11
Headmen,	....	....	....	....	1	....	....	....	....	....	....	....	1
Totals,	6	7	4	5	12	1	7	5	5	3	2	5	62
Outside													
Blacksmiths and carpenters,	....	....	....	....	....	....	....	....	....	1	....	....	1
Engineers and firemen,	....	....	....	....	....	1	....	....	....	....	....	....	1
Slatepickers (boys),	....	....	....	....	1	....	....	....	....	....	....	....	1
Machinists,	....	....	....	....	....	....	1	....	....	....	....	....	1
Headmen,	....	....	....	....	....	1	....	....	....	....	....	....	1
Laborers,	....	....	....	2	....	....	....	....	....	....	....	....	2
Totals,	....	....	....	2	1	2	1	....	....	1	....	....	7
Grand totals inside and outside,	6	7	4	7	13	3	8	5	5	4	2	5	69

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	....	....	1	1	....	1	1	1	....	1	....	7
English,	....	....	1	....	....	....	....	....	....	....	....	....	1
Irish,	....	....	....	1	....	....	....	....	1	....	....	....	2
German,	....	....	....	....	....	....	1	....	....	....	....	....	1
Polish,	....	1	....	....	1	1	1	1	1	2	1	...	9
Italian,	2	....	2	2	....	1	2	....	2	....	....	1	12
Slavonian,	....	....	....	....	2	....	....	....	....	....	....	1	3
Lithuanian,	....	....	....	....	....	1	2	2	....	1	1	....	7
Austrian,	1	....	....	....	....	....	....	....	....	....	....	....	1
Russian,	....	....	....	....	....	....	....	....	1	1	....	....	2
Totals,	4	1	3	4	4	3	7	4	6	4	3	2	45

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	1	....	2	2	1	2	2	1	1	1	1	14
English,	2	....	....	....	....	....	....	....	....	....	....	....	2
Welsh,	1	....	....	....	....	....	....	....	....	....	....	1	2
Irish,	....	....	....	....	....	....	....	....	....	1	....	....	1
German,	....	....	....	....	....	1	....	....	....	....	....	....	1
Polish,	1	4	2	2	7	....	3	2	2	1	....	2	26
Italian,	2	1	...	1	1	....	3	....	1	1	....	1	11
Lithuanian,	....	....	2	....	1	....	....	....	1	....	....	....	4
Austrian,	....	....	....	....	....	....	....	....	....	....	1	....	1
Russian,	....	1	....	2	2	....	....	1	....	....	....	....	6
Greek,	....	....	....	....	....	1	....	....	....	....	....	....	1
Totals,	6	7	4	7	13	3	8	5	5	4	2	5	69

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Pennsylvania Coal Co.															
Barnum Colliery:															
Barnum No. 2, ...	Shaft,.....	Gaseous, ..	2 Fans, ..	17	5.2	4.8	70	.8	Guibal, ...	Steam,.....	9	132,100	91,200	157,000	243
				20	6.6	5.5	65	.7							
Number 9 Colliery:															
Number 1, ...	Shaft,...		Fan, ...	20	6.6	5.5	60	.8		Steam,.....	5	93,178	77,070	100,000	209
Number 8, ...	Shaft,...		Fan, ...	20	6.6	5.5	58	.2		Steam,.....	9	70,260	65,500	82,300	257
Leadville, ...	Shaft,...	Gaseous,	2 Fans, ...	20	6.6	5.5	64	1.3	Guibal, ...	Steam,.....	8	140,300	122,000	156,000	330
Number 10, ...	Shaft,...		Fan, ...	20	6.6	5.5	62	2		Steam,.....	9	126,300	97,800	132,400	373
Curtis, ...	Slope, ..		Fan, ...	10	4.5	2.8	78	.5		Electricity,.	2	31,800	25,200	36,000	75
Ewen Colliery:															
Number 7, ...			Fan, ...	20	6.6	5.5	60	.8	Guibal, ...		6	86,824	79,782	91,636	232
Number 4, ...	Shaft,...	Gaseous,	2 Fans, ...	20	6.6	5.5	65	1.5	Guibal, ...	Steam,.....	7	63,810	52,635	81,410	214
Hoyt, ...			Fan, ...	20	6.6	5.5	.....	.....	Guibal, ...		...	.....	.....	.....	....
Hoyt, ...			Fan, ...	14	6	4.6	108	1.8	Vulcan, ...		10	123,650	113,400	149,700	385
Number 6 Colliery:															
Number 5, ...	Shaft,.....	Gaseous, ..	Fan, ...	20	6.6	5.5	65	1.1			8	126,652	125,284	127,644	322
Number 6, ...	Shaft,.....	Gaseous, ..	Fan, ...	20	6.6	5.5	68	1	Guibal, ...	Steam,.....	9	109,230	97,510	120,120	347
Number 11, ...	Shaft,.....	Gaseous, ..	Fan, ...	20	6.6	5.5	64	1			7	61,300	53,600	71,300	180
Wright, ...	Slope, ...	Non-gas., .	Fan, ...	20	6.6	5.5	57	.5			2	41,960	40,190	46,820	108
Number 14 Colliery:															
Number 14, ...	Shaft,.....	Gaseous, ..	3 Fans, ...	20	6.6	5.5	67	1.3			10	198,142	134,531	219,586	441
Number 14, ...	Tunnel, .		Fan, ...	20	6.6	5.5	67	.8			14	149,550	127,000	175,175	363
Courtright, ...	Slope, ..	Gaseous,	Fan, ...	20	6.6	5.5	64	.9	Guibal, ...	Steam,.....	4	115,020	110,330	124,080	234
New Diamond, ...	Slope, ..		Fan, ...	20	6.6	5.5	36	.3			2	36,300	27,010	39,150	66
Number 14 Diamond, ...	Slope, ..		Fan, ...	17	5	4	70	.8			2	30,310	23,135	32,620	25

Hudson Coal Co.															
Pine Ridge Colliery:															
Pine Ridge,	Shaft,	Gaseous,	Fan,	28	8	7.75	60	2.2	Guibal,	Steam,	10	250,000	173,000	258,000	649
Laurel Run,	Slope,	Gaseous,	Fan,	28	8	7.75	56	2.1	Guibal,	Steam,	8	124,410	81,920	130,820	385
Laflin Colliery:															
Laflin,	Shaft,	Non-gas.,	Fan,	20	5	5	75	.7	Guibal,	Steam,	6	114,575	100,670	125,095	293
Laflin,	Tunnel,	Non-gas.,	Fan,	14	4	3.6	85	.2	Guibal,	Steam,	3	56,755	50,805	63,315	139
Hillside Coal and Iron Co.															
Butler Colliery:															
Butler,	Slope,	Non-gas.,	Fan,	20	6.6	5.5	80	1.4	Guibal,	Steam,	3	64,300	61,950	64,710	110
Thomas,	Shaft,	Non-gas.,	2 Fans,	15	4	4	100	1.25	Guibal,	Electricity,	14	228,840	211,290	262,110	371
				14	6	4.6	98	2.5	Vulcan,	Steam,					
Fernwood,	Slope,	Non-gas.,	Fan,	20	6.6	5.5	50	.8	Guibal,	Electricity,	3	83,000	57,500	90,600	165
Butler Checker,†	Slope,	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	....
Lehigh Valley Coal Co.															
Mineral Spring Colliery:															
Mineral Spring,	Shaft,	Gaseous,	Fan,	20	6.6	5.6	60	1.2	Guibal,	Steam,	7	143,500	109,800	149,200	236
Coal Brook,	Tunnel,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	15,200	12,500	16,900	30
Mineral Spring,	Slope,	Gaseous,	Fan,	12	4	3.6	100	.8	Guibal,	Steam,	2	28,600	26,000	29,000	50
Heidelburg No. 1 Colliery:															
Red Ash No. 1,	Slope,	Non-gas.,	Fan,	16	4	2.6	80	.6	Guibal,	Steam,	2	54,342	50,532	55,908	160
Marcy,	Slope,		Fan,	10	4	4	144	.8			2	42,968	41,092	52,078	47
Number 2,	Shaft,		Fan,	20	5.8	5	60	.4			2	40,600	23,300	41,500	124
Heidelburg,	Tunnel,		Fan,	12.8	3.8	3.4	80	.6			2	51,814	37,350	54,716	97
Delaware and Hudson Co.															
Delaware Colliery:															
Delaware,	Shaft,	Gaseous,	3 Fans,	22.5	6.6	5.6	80	6.6	Jeffrey, / Guibal, / Guibal,	Steam,	10	248,249	202,773	300,161	355
Traders Coal Co.															
Ridgewood Colliery:															
Ridgewood,	Slope,	Non-gas.,	Fan,	16	4	5	75	.8	Guibal,	Steam,	4	64,800	60,000	67,000	254
Ridgewood,	Tunnel,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	15,720	14,850	16,485	36
Wilkes-Barre Colliery Co.															
Madeira Colliery:															
Madeira,	Slope,	Non-gas.,	Fan,	12	5	2.5	65	.6	Jeffrey,	Electricity,	2	77,000	62,500	77,500	185
Madeira,	Tunnel,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	14,630	12,850	15,210	30
McCauley Coal Co.															
Pickaway Colliery:															
Pickaway,	Tunnel,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	5,700	4,650	7,650	28
Central Coal Co.															
Wyoming Colliery:															
Wyoming,	Slope,	Non-gas.,	Fan,	6	2.4	1.6	90	1	American Blower.	Steam,	1	16,000	15,400	16,800	76

†Abandoned.

TABLE I.—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
John Conlon Coal Co.															
Conlon Colliery:															
Conlon,	Slope,	Non-gas.,	**	.....	.....	.....	.....	.....	.....	.....	1	25,000	23,200	26,540	18

**Ventilated by fan at Pine Ridge.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Pennsylvania Coal Co. Barnum, ... } Number 9, ... } Ewen, ... } Numbers 6 and 14, ... }	Luzerne,.....	William P. Jennings,	Scranton, ...	A. E. Yetter, ... } A. E. Yetter, ... } David Girvan, ... } David Girvan, ... }	Pittston, ...	Erie
Hudson Coal Co. Pine Ridge, ... } Laflin, ... }	Luzerne,.....	C. C. Rose, ...	Scranton, ...	E. R. Pettebone, ...	Dorranceton, ...	Delaware and Hudson
Hillside Coal and Iron Co. Butler, ...	Luzerne,.....	William P. Jennings,	Scranton, ...	A. E. Yetter, ...	Pittston, ...	Erie
Lehigh Valley Coal Co. Mineral Spring, ... } Heidelburg No. 1, ... }	Luzerne,.....	Thomas Thomas, ...	Wilkes-Barre, ...	{ John H. Haerther,... { W. D. Owens, ...	Wilkes-Barre, ... } Pittston, ... }	Lehigh Valley
Delaware and Hudson Co. Delaware, ...	Luzerne,.....	C. C. Rose, ...	Scranton, ...	E. R. Pettebone, ...	Dorranceton, ...	Delaware and Hudson
Traders Coal Co. Ridgewood, ...	Luzerne,.....	E. B. Jermyn, ...	Scranton, ...	T. J. Corcoran, ...	Rendham, ...	Erie and C. R. R. of N. J.
Wilkes-Barre Colliery Co. Madeira, ...	Luzerne,.....	W. G. Thomas, ...	Wilkes-Barre, Parsons Branch P. O.	W. G. Thomas, ...	Wilkes-Barre, Parsons Branch P. O.	Delaware and Hudson
McCauley Coal Co. Pickaway, ...	Luzerne,.....	Wm H. McCauley,...	Pittston, ...	George Rowan, ...	Pittston, ...	Lehigh Valley
Central Coal Co. Wyoming,*	Luzerne,.....	A. F. Wolf, ...	Hudson, ...	Joseph G. Saricks, ...	Freeland, ...	Delaware and Hudson
John Conlon Coal Co. Conlon,*	Luzerne,.....	John Conlon, ...	Hudson, ...	.....	.....	Delaware and Hudson

*New mines.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Pennsylvania Coal Co.													
Barnum,	Luzerne,	224,556	22,721	2,894	250,171	220	552	3	2	205,000	6,600	3,000	41
Number 9,		734,408	70,226	7,747	812,381	286	1,789	6	4	575,000	28,500	16,475	135
Ewen,		596,288	57,946	460	654,634	269	1,458	4	6	625,800	28	23,112	140
Number 6,		552,056	40,620	13,901	606,577	285	1,726	5	6	792,575	300	68,277	140
Number 14,		696,513	59,974	2,917	759,404	289	1,674	4	6	890,025	16,675	31,716	198
Totals,		2,803,821	251,487	27,859	3,083,167	.....	7,199	22	24	3,088,400	52,103	142,580	654
Hudson Coal Co.													
Pine Ridge,	Luzerne,	449,269	37,680	3,746	490,695	271	1,297	7	13	619,575	21,073	500	42
Laflin,		178,518	21,928	1,050	201,496	194	579	2	4	296,075	63,835	.....	76
Totals,		627,787	59,608	4,796	692,191	.....	1,786	9	17	915,650	84,908	500	118
Hillside Coal and Iron Co.													
Butler,	Luzerne,	628,684	48,254	7,991	684,929	202	1,802	3	5	699,775	36,800	38,529	101
Lehigh Valley Coal Co.													
Mineral Spring,	Luzerne,	238,788	24,946	8,386	272,100	224	457	2	5	128,450	111,775	.....	68
Heidelburg No. 1,		256,635	30,326	2,169	289,130	244	553	3	4	221,025	26,785	.....	92
Totals,		495,423	55,252	10,555	561,230	.....	1,010	5	9	349,475	141,560	.....	160

Delaware and Hudson Co.													
Delaware,	Luzerne,	282,502	29,497	5,650	317,649	261	701	3	6	358,050	16,514	.....	61
Traders Coal Co.													
Ridgewood,	Luzerne,	146,275	12,775	757	159,807	256	404	1	1	226,675	6,000	.....	39
Wilkes-Barre Colliery Co.													
Madeira,	Luzerne,	143,240	1,437	2,551	147,228	290	273	2	5	150,000	6,000	.....	13
McCauley Coal Co.													
Pickaway,	Luzerne,	9,895	350	17	10,262	232	44	.....	2	750	2,500	.....	6
Central Coal Co.													
Wyoming,	Luzerne,	3,912	600	100	4,612	67	104	.....	.....	6,250	4,075	.....	3
John Conlon Coal Co.													
Conlon,	Luzerne,	2,545	120	400	3,065	40	28	.....	.....	3,125	100	.....	1
Grand totals,		5,144,084	459,380	60,676	5,664,140	.....	13,351	45	69	5,798,150	350,560	181,609	1,156

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Pennsylvania Coal Co.,	Luzerne,	.....	.....	110	16,008	16,008	13	12	31	199	14,860	22	33,403	17,980	6	19
Hudson Coal Co.,		.....	.....	24	5,140	5,140	1	.....	11	77	4,635	6	8,200	4,300	2	4
Hillside Coal and Iron Co.,		.....	.....	24	3,460	3,460	5	.....	27	32	3,375	7	4,000	1,700	5	1
Lehigh Valley Coal Co.,		.....	.....	16	2,950	2,950	3	.....	.....	45	4,395	8	5,897	4,977	.....	.....
Delaware and Hudson Co.,		.....	.....	6	1,800	1,800	1	.....	4	25	2,124	3	5,200	1,900	1	2
Traders Coal Co.,		.....	.....	2	800	800	1	.....	.....	10	1,200	2	5,000	1,000	.....	.....
Wilkes-Barre Colliery Co.,		.....	.....	1	100	100	....	.....	2	.....	.....	2	800	300	.....	.....
McCauley Coal Co.,		.....	.....	1	80	80	....	.....	.....	2	80	.....	.....	.....	.....	.....
Central Coal Co.,		.....	.....	2	250	250	1	.....	.....	1	95	1	500	10	.....	.....
John Conlon Coal Co.,		.....	.....	1	50	50	....	.....	.....	.....	135	.....	.....	.....	.....	.....
Totals,	.....	.....	.....	187	30,638	30,638	25	12	75	391	30,899	51	63,000	32,167	14	26

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Pennsylvania Coal Co.,	Luzerne,	16	45	19	1,844	1,940	623	107	31	449	534	5,608	2	5	142	132	295	137	6	872	1,591	7,199
Hudson Coal Co.,		2	5	12	515	566	142	13	14	131	38	1,438	..	3	17	65	20	50	4	189	348	1,786
Hillside Coal and Iron Co.,		3	11	..	407	501	63	12	8	277	119	1,401	..	1	26	30	89	32	3	220	401	1,802
Lehigh Valley Coal Co.,		5	20	..	368	148	118	11	11	36	69	786	..	3	29	40	....	19	6	127	224	1,010
Delaware and Hudson Co.,		1	1	5	183	235	70	7	3	39	11	555	..	2	9	25	29	2	2	77	146	701
Traders Coal Co.,		1	3	2	121	113	46	8	2	23	12	331	1	1	6	8	16	1	2	38	73	404
Wilkes-Barre Colliery Co.,		1	1	2	53	86	12	....	4	20	36	215	..	1	5	6	9	....	2	35	58	273
McCauley Coal Co.,		1	..	..	12	12	3	....	..	1	....	29	1	1	....	1	4	4	..	4	15	44
Central Coal Co.,		1	..	..	24	30	3	....	1	17	....	76	1	1	4	6	5	....	2	9	28	104
John Conlon Coal Co.,		1	..	..	4	11	1	....	..	....	1	18	1	..	....	1	3	....	..	5	10	28
Totals,		32	86	40	3,531	3,642	1,081	158	74	993	820	10,457	6	18	238	314	470	245	27	1,576	2,894	13,351

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Pennsylvania Coal Co.,	Luzerne,	25	18	22	22	23	25	24	23	23	25	19	21	270
Hudson Coal Co.,		20	18	15	20	19	19	20	20	20	22	20	20	233
Hillside Coal and Iron Co.,		26	20	24	24	25	26	26	25	25	26	20	25	292
Lehigh Valley Coal Co.,		15	13	18	22	22	24	16	18	23	24	20	20	234
Delaware and Hudson Co.,		24	18	12	22	23	24	25	23	23	26	18	23	261
Traders Coal Co.,		24	19	23	21	21	20	24	23	21	21	19	20	256
Wilkes-Barre Colliery Co.,		23	19	26	24	24	25	25	25	25	26	24	24	290
McCauley Coal Co.,		26	20	22	19	24	18	24	17	20	8	10	24	232
Central Coal Co.,		.....	.....	.....	.....	6	16	12	.....	.....	.....	11	22	67
John Conlon Coal Co.,		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	20	40

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 7	Tony Puma, ...	Italian, ...	Miner, ...	42	M.	1	5	Number 6, ...		Killed by blast he was firing at face of breast.
16	George Clements, ...	Austrian, ..	Company man.	53	M.	1	....	Number 9, ...		Killed by explosion of gas in abandoned breast.
21	Thomas Schumacher,	American, ..	Slatepicker, .	16	S.	....	....	Pine Ridge, ...		Killed by being caught in gear wheels on scraper line. Outside.
27	Angalo Passon, ...	Italian, ...	Miner, ...	49	M.	1	5	Heidelburg No. 1.		Killed by fall of roof rock while removing pillars.
Feb. 20	Andrew Banyes, ...	Polish, ...	Miner, ...	24	M.	1	1	Pine Ridge, ...		Fatally injured by blast he was firing. Died March 5.
March 19	Vallario Venshotti, ..	Italian, ...	Miner, ...	26	S.	....	....	Ridgewood, ...		Fatally injured by fall of roof rock. Died next day.
	William Branch, ...	English, ...	Miner, ...	52	M.	1	....	Mineral Spring,		Killed by blast while taking down top coal in his breast. He cut his match.
24	Carllak Swera, ...	Italian, ...	Miner, ...	26	S.	....	....	Butler, ...		Killed by fall of roof rock while standing prop under it.
April 2	Michael Cavanaugh, ..	Irish, ...	Trackman, ..	48	S.	....	....	Number 9, ...	Luzerne, ...	Fatally injured by fall of rider coal. Died April 5.
6	Martin McGuire, ...	American, ..	Miner, ...	32	S.	....	....	Number 6, ...		Killed by premature blast he was firing.
7	Toney White, ...	Italian, ...	Company man.	35	W.	....	2	Heidelburg No. 1.		Killed by being caught in sheave wheel of plane. Outside.
16	Augustine Pacie, ...	Italian, ...	Laborer, ...	25	S.	...	....	Number 14, ...		Killed by fall of roof rock. He went back for his shovel.
May 2	Samuel Dudick, ...	Slavonian, ..	Company man.	35	M.	1	1	Ewen, ...		Killed by runaway trip of cars while walking up the inside slope.
	William Serchioich,	Slavonian, ..	Company man.	34	M.	1	1			
15	Lewis Klensock, ...	Polish, ...	Laborer, ...	47	M.	1	3	Mineral Spring,		Killed by fall of roof rock in face of breast.
16	Joseph Febish, ...	American, ..	Driver, ...	16	S.	...	....	Pine Ridge, ...		Fatally burned by explosion of gas. Died next day.
June 8	Anthony Kiraftus, ..	Polish, ...	Miner, ...	40	M.	1	....	Ewen, ...		Killed by fall of roof rock while restanding two props he had shot out.
26	Nicholas Pautasno, ..	Italian, ...	Laborer, ...	34	M.	1	1	Number 6, . ..		Killed by rock sliding from an old gob on him.

TABLE 4—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
June 26	Michael Martincavage,	Lithuanian,	Laborer, ...	26	S.	....	....	Delaware, ...		Killed by fall of roof rock at face of breast.
July 1	Charles Rescavage,..	Lithuanian,	Miner, ...	40	M.	1	8	Number 9, ..		Fatally injured by fall of roof rock at face of breast. Died same day.
	Joseph Zigman, ...	Lithuanian,	Miner, ...	38	M.	1	6			
	George Marichi, ...	Polish,.....	Miner, ...	45	M.	1	5	Pine Ridge, ...		Instantly killed by fall of fire-clay roof at face.
	Anthony Bonetskie, ..	German, ...	Miner, ...	48	M.	1	4	Pine Ridge, ...		Fatally injured by blast he was firing. Died July 4.
10	Alford Richards, ...	American, ..	Miner, ...	26	M.	1	1	Barnum, ...		Fatally injured by fall of rider coal at face of breast.
17	Pasqual Suinta, ...	Italian, ...	Laborer, ...	27	M.	1	....	Number 6, ..		Instantly killed by premature blast they were about to fire at face of breast.
	Nicholas Vulp, ...	Italian, ...	Miner, ...	23	S.	....	....			
Aug. 18	John Patrige, ...	Lithuanian,	Laborer, ...	23	S.	....	....	Delaware, ...		Killed by fall of bell-shaped piece of rock from the roof.
22	John Sufash, ...	Lithuanian,	Miner, ...	27	S.	....	....	Laflin, ...		Killed by electricity. He caught hold of main feed wire.
26	Bala Fabian, ...	Polish,.....	Miner, ...	38	M.	1	2	Delaware, ...	Luzerne, ...	Fatally injured by premature blast. Died same day.
28	Samuel Jenkins, ...	American, ..	Driver, ...	18	S.	....	....	Laflin, ...		Fatally injured by car on head of plane. Died same day.
Sept. 1	Paulain Jiseppic, ...	Italian, ...	Miner, ...	24	S.	....	....	Number 14, ...		Killed by fall of roof while standing prop.
5	Walter Ruzcuski, ...	Russian, ...	Laborer, ...	25	M.	1	1	Pine Ridge, ...		Fataly injured by being struck by lever while putting car on track. Died September 6.
8	Nicard Batiano, ...	Italian, ...	Miner, ...	27	S.	....	....	Butler, ...		Fatally injured by prop falling on him. Died same day.
23	Leonard Maxfield, ...	American, ..	Laborer, ...	25	M.	1	1	Madeira, ...		Killed by fall of coal at face of breast.
29	Thomas Cavanaugh, ..	Irish, ...	Miner, ...	49	W	....	....	Number 9, ...		Killed by fall of rider coal at face of breast.
30	Joseph Kaczeski, ...	Polish,.....	Laborer, ...	19	S.	....	....	Madeira, ...		Killed by fall of rock at face of breast.
Oct. 16	Thomas Keen, ...	Polish,.....	Laborer, ...	22	S.	....	....	Butler, ...		Killed by fall of roof rock at face of breast.
21	Thomas Kasmonitis, ..	Lithuanian,	Miner	37	M.	1	2	Number 14, ...		Fatally injured by fall of middle rock. Died same day.

Oct.	27	Charles Barella, ...	Russian, ...	Doorman, ...	54	M.	1	....	Ewen, ...	Luzerne, ...	Killed by trip of cars jumping track on slope.
	28	John Wyznicki, ...	Polish,.....	Footman, ...	20	S.	....	....	Number 14, ...		Killed by runaway trip of cars on slope.
Nov.	5	Ainsworth Hopkins, ..	American, ..	Driver, ...	17	S.	....	....	Pine Ridge, ...		Fatally injured by blast. Died same day.
		Joseph Lukes, ...	Polish,.....	Laborer, ...	36	M.	1	4	Heidelburg No. 1.		Killed by fall of roof while removing pillars.
	10	George Gregallis, ...	Lithuanian,	Laborer, ...	33	M.	1	3	Number 9, ...		Fatally injured by empty car while running it down to face of breast. Died November 12.
Dec.	3	Martin Manello, ...	Italian, ...	Laborer, ...	23	S.	....	....	Barnum, ...		Fatally injured by fall of rider coal. Died same day.
	29	Mather Zeletsky, ...	Slavonian, ..	Laborer, ...	22	M.	1	1	Barnum, ...		Killed by falling down the shaft from Marcy to Red Ash vein.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 17	Peter Leseinske, ...	Polish,.....	Miner, ...	32	M.	Number 6, ...		Face and hands burned by gas in old abandoned workings.
19	William Dixon, ...	English, ...	Miner, ...	46	M.	Delaware, ...		Back and leg cut by fall of roof rock at face of breast.
23	Richard Davis, ...	Welsh, ...	Miner, ...	50	M.	Madeira, ...		Arm broken by fall of rock while barring it down at face of breast.
27	Anthony Cumba, ...	Italian, ...	Miner, ...	32	S.	Number 6, ...		Seriously injured by premature explosion of powder while removing the cartridge
	Louis Yernello, ...	Italian, ...	Laborer, ...	22	S.			powder from the hole at face of breast.
29	William Headly, ...	English, ...	Laborer, ...	38	S.	Mineral Spring, ...		Head and back bruised by fall of top rock at face of breast.
Feb. 11	Peter Kurpinski, ...	Polish,.....	Miner, ...	37	M.	Heidelburg No. 1, ..		Ankle broken by being caught between oil box of car and lump of coal at face of breast.
	Andrew Wasilistie, ..	Polish,.....	Laborer, ...	23	S.	Number 9, ...		Leg broken by a piece of soap stone falling from roof at face of breast.
14	John Perko, ...	Russian, ...	Laborer, ...	26	S.	Delaware, ...	Luzerne, ...	Leg and arm broken by fall of rock while helping his miner to stand prop at face of breast.
	Andrew Machigo, ...	Polish,.....	Laborer, ...	25	S.	Pine Ridge, ...		Hands and face burned by gas after returning to face of breast from firing a blast.
16	Andrew Chisel, ...	Italian, ...	Miner, ...	45	W.	Heidelburg No. 1, ...		Pelvis fractured by fall of rock while standing prop at face of breast.
27	Edward Finerty, ...	American, ..	Runner, ...	30	S.	Butler, ...		Three fingers cut off by rope on car at foot of slope. The mules started suddenly.
28	Metio Ludrick, ...	Polish,.....	Driver, ...	23	M.	Number 14, ...		Kicked on head by mule while backing them up on gangway road.
March 7	George Gregaski, ...	Polish,.....	Miner, ...	35	S.	Number 14, ...		Leg broken by fall of rock at face of breast while barring it down.
11	Charles Buzas, ...	Lithuanian,	Miner, ...	30	M.	Ewen, ...		Leg broken by fall of rock at face while removing pillars.
	Charles Bendiaz, ...	Lithuanian,	Laborer, ...	50	S.	Pine Ridge, ...		Hip dislocated by being struck by car on gangway road while passing in front of it.

March	16	Jetikis Mozowski, ...	Polish,.....	Miner, ...	35	M.	Laflin, ...			Hand badly crushed by rock falling on it from roof at face.
April	1	George Renko, ...	Russian, ...	Laborer, ...	39	M.	Delaware, ...			Eye injured by being struck by a piece of steel that flew from a key he was driving in a shaft in breaker. Outside.
		Stephen Sheroskie, ..	Russian, ...	Laborer, ...	38	M.	Mineral Spring, ...			Arm broken while putting belt on wheel in breaker. Outside.
	10	Samuel Smith, ...	Italian, ...	Laborer, ...	23	S.	Number 9, ...			Leg bruised and shoulder dislocated by being struck by car on slope.
	16	William Loftus, ...	American, ..	Runner, ...	26	S.	Pine Ridge, ...			Arm broken by being struck by rope that broke on slope.
	17	Luis Rogel, ...	Polish,.....	Laborer, ...	27	M.	Number 9, ...			Ankle broken by car at face. While loading car he knocked block out from under wheel.
	25	Ignatz Zeske, ...	American, ..	Runner, ...	19	S.	Laflin, ...			Fingers crushed between coal on car and roof on gangway.
	29	Stanley Golden, ...	Polish,.....	Miner, ...	47	M.	Mineral Spring, ...			Arm broken by fall of top coal while barring it down at face of breast.
May	6	Joseph Hands, ...	Lithuanian,	Laborer, ...	26	S.	Ewen, ...			Leg broken by car while pulling block from wheel at face of breast.
	11	Joseph Undereka, ...	Polish,.....	Laborer, ...	26	M.	Parnum, ...			Leg broken by fall of coal at face of breast.
	14	William Miller, ...	Polish,.....	Slatepicker, ...	17	S.	Hickaway, ...			Ribs broken by falling off timber in breaker while climbing same. Outside.
	16	Thomas Coffee, ...	American, ..	Headman, ...	21	S.	Pine Ridge, ...	Luzerne, ...		Burned by an explosion of gas on gangway road while going to work in the morning.
		Stephen Podracky, ..	American, ..	Driver, ...	16	S.				
	18	Arthur Silkoski, ...	Polish,.....	Runner, ...	22	S.	Number 14, ...			Leg broken by car that he was running out of breast.
	19	Janko Wysloski, ...	Russian, ...	Laborer, ...	24	S.	Pine Ridge, ...			Thumb cut off by car wheel while pulling block at face of breast.
	19	Frank Weiss, ...	Polish,.....	Miner, ...	32	M.	Delaware, ...			Leg broken by flying coal from blast that he was firing in breast.
	21	Peter Smithrawicz, ..	Polish,.....	Miner, ...	27	M.	Number 9, ...			Back broken by fall of middle rock at face of breast.
	22	Michael Paulyisoch, ..	Russian, ...	Miner, ...	33	M.	Pine Ridge, ...			Arm broken by premature blast that he was firing at face of breast.
	22	Tony Monashella, ...	Italian, ...	Miner, ...	27	M.	Butler, ...			Arm broken by being struck by rope on slope.
	25	Frank Bezicki, ...	Polish,.....	Miner, ...	28	M.	Laflin, ...			Back bruised by fall of rock while barring it down in breast.
	29	John Gazoo, ...	Polish,.....	Laborer, ...	25	S.	Heidelburg No. 1, ..			Hip dislocated by fall of rock at face of breast.
June	13	Joseph Zagaro, ...	German, ...	Miner, ...	34	M.	Delaware, ...			Shoulder bruised by fall of rock while standing prop in breast.
	29	James O'Brien, ...	American, ..	Fireman, ...	35	S.	Ewen, ...			Collar bone broken by being struck by sheet iron blown from roof of boiler house by the wind. Outside.
		Charles Corey, ...	Greek, ...	Headman, ...	41	S.	Butler, ...			Leg broken by cars on head of breaker. Outside.
July	2	Santo Mangano, ...	Italian, ...	Miner, ...	26	M.	Ewen, ...			Leg broken by car in breast.
	6	John Coveleski, ...	Polish,.....	Miner, ...	38	M.	Ewen, ...			Skull fractured by premature blast that he was firing in breast.

TABLE 5—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
July 8	Ralph Jenkins, ...	American, ..	Runner, ...	23	M.	Madeira, ...		Pelvis fractured by being caught between car and rib on gangway.
16	William Gibbing, ...	American, ..	Machinist, ...	32	M.	Ewen, ...		Burned by steam while repairing steam line. Joint blew out. Outside.
17	Ralph Muncha, ...	Italian, ...	Miner, ...	26	M.	Ridgewood, ...		Leg broken by fall of rock at face of breast.
18	Ross Maria, ...	Italian, ...	Miner, ...	39	M.	Number 6, ...		Leg broken by fall of rock at face of breast.
29	John Susco, ...	Polish, ...	Miner, ...	28	M.	Madeira, ...		Leg broken by flying coal from blast that he was firing in breast.
	Anthony Ridelski, ...	Polish, ...	Miner, ...	37	S.	Pine Ridge, ...		Leg broken by fall of rock at face of breast.
Aug. 4	Martin Obrinski, ...	American, ..	Miner, ...	40	M.	Pine Ridge, ...		Arm burned by powder while making cartridge at box.
8	John Nalabinskie, ..	Russian, ...	Runner, ...	21	S.	Number 14, ...		Leg broken while riding between cars on gangway road.
22	John Stuk, ...	Polish, ...	Miner, ...	42	M.	Number 14, ...	Luzerne, ...	Arm broken by premature blast that he was firing in rock at breast.
27	Prokon Wergala, ...	Polish, ...	Laborer, ...	45	M.	Laflin, ...		Arm and leg cut by flying coal from blast that he was firing in breast. He thought it had missed and went back.
29	Charles Morgan, ...	American, ..	Runner, ...	18	S.	Number 6, ...		Leg broken by car running away out of breast.
Sept. 5	Frank Chaskar, ...	Lithuanian,	Laborer, ...	53	M.	Number 6, ...		Back seriously injured by fall of rock at face of breast.
10	Joseph Moracofski, ..	Polish, ...	Miner, ...	27	M.	Pine Ridge, ...		Face and arm cut by flying coal from blast that he was firing in breast.
15	Angelo Arbuzzas, ...	Italian, ...	Laborer, ...	28	M.	Number 14, ...		Leg broken by fall of rock at face of breast.
21	Anthony Jontoskie, ..	Polish, ...	Laborer, ...	30	S.	Butler, ...		Leg broken by fall of soap stone roof at face of breast.
30	Robert Smith, ...	American, ..	Miner, ...	42	M.	Madeira, ...		Bruised and cut by fall of rock in face of breast.
Oct. 6	Samuel Lonett, ...	Italian, ...	Laborer, ...	21	S.	Pickaway, ...		Head bruised by fall of rock at face of breast.

Oct.	6	Thomas Gauard, ...	Irish,.....	Miner, ...	49	M.	Pine Ridge, ...		Leg broken and cut over eye by flying coal from blast that he was firing in face of breast.
	9	Roman Lavendosky, ..	Polish,.....	Miner, ...	44	M.	Delaware, ...		Face cut by flying coal from blast that he was firing in breast.
	13	John Smith, ...	American, ..	Carpenter, ...	43	M.	Pine Ridge, ...		Arm broken and ribs fractured by falling into pocket of breaker. A plank broke on which he was standing. Outside.
Nov.	13	Michael Quinn, ...	American, ..	Laborer, ...	52	M.	Butler, ...		Leg broken by car jumping track on him on gangway road.
	24	John R. Youlchuck, ..	Austrian, ..	Miner, ...	55	M.	Mineral Spring, ...	Luzerne, ...	Leg broken by flying coal from blast that he was firing. He thought it had missed and went back, when the blast exploded.
Dec.	3	Frank Rotha, ...	Italian,.....	Laborer, ...	28	M	Mineral Spring, ...		Back and two ribs broken by fall of rock at face of breast.
	4	Edward Feleskie, ...	American, ..	Runner, ...	17	S.	Heidelburg No. 1, ..		Leg broken by falling under car while spragging it on gangway road.
	12	William J. Jones, . ..	Welsh,.....	Driver, ...	20	S.	Madeira, ...		Ankle broken by falling under car on gangway while sitting on bumper.
	17	Stanley Konosky, ...	Polish,.....	Laborer, ...	22	S.	Barnum, ...		Leg broken by fall of coal at face of breast.
	28	John Kumple, ...	Polish,.....	Laborer, ...	25	M.	Pine Ridge, ...		Face cut by premature blast while helping to tamp hole in face of breast.

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Barnum, Number 9, Ewen, Number 6 and Number 14.—Ventilation, roads, drainage and condition as to safety, good.

HUDSON COAL COMPANY

Pine Ridge.—Ventilation and condition as to safety, good. Roads and drainage, fair.

Laflin.—Ventilation, roads, drainage and condition as to safety, good.

HILLSIDE COAL AND IRON COMPANY

Butler.—Ventilation, roads, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Mineral Spring and Heidelburg No. 1.—Ventilation, roads, drainage and condition as to safety, good.

DELAWARE AND HUDSON COAL COMPANY

Delaware.—Ventilation, roads, drainage and condition as to safety, good.

TRADERS COAL COMPANY

Ridgewood.—Ventilation, roads, drainage and condition as to safety, good.

WILKES-BARRE COLLIERY COMPANY

Madeira.—Ventilation, roads, drainage and condition as to safety, good.

McCAULEY COAL COMPANY

Pickaway.—Ventilation, roads and drainage, fair. Condition as to safety, good.

CENTRAL COAL COMPANY

Wyoming.—Ventilation, roads, drainage and condition as to safety, good.

JOHN CONLON COAL COMPANY

Conlon.—Ventilation, roads, drainage and condition as to safety, good.

IMPROVEMENTS

HUDSON COAL COMPANY

Pine Ridge Colliery.—No. 26 slope was driven 700 feet from Checker to Bennett vein. No. 25 slope was driven 500 feet in Ross vein. No. 28 slope was driven 600 feet in Red Ash vein. No. 19 plane was extended 300 feet in Red Ash vein. No. 4 slope in Laurel Run was driven 300 feet in Ross vein. No. 4 slope in Red Ash vein was driven 300 feet. No. 6 plane was extended 300 feet in Cooper vein.

Laflin Colliery.—No. 8 slope in top split of Red Ash vein was driven 400 feet.

CENTRAL COAL COMPANY

Wyoming Colliery.—This colliery is located in Plains township, Luzerne county, east of the Delaware colliery, on the Delaware and Hudson Railroad, between the boroughs of Laflin and Hudson. A small breaker was erected, with a capacity of 300 tons per day, and started to prepare coal for the market on May 1, 1914, the coal being shipped to market on the Delaware and Hudson Railroad. The mine openings consist of a drift driven from the surface to the Ross vein, and a slope sunk from the surface to the Bennett vein, one mile southeast of the breaker. The coal is taken to the breaker by a small locomotive.

JOHN CONLON COAL COMPANY

Conlon Colliery.—This colliery is located in the village of Hudson, Luzerne county. A small breaker was erected, having a capacity of 250 tons per day, and is operated by electricity furnished by the Wilkes-Barre Light and Power Company. The breaker started to prepare the coal for market November 3, 1914, shipping on the Delaware and Hudson Railroad. The mine opening consists of a slope sunk from the surface to the Cooper vein 300 feet. The workings are ventilated by the Pine Ridge fan.

PENNSYLVANIA COAL COMPANY

Ewen Colliery.—Ewen breaker, situated in Jenkins township, was totally destroyed by fire of unknown origin on the morning of December 11. The destruction of the breaker necessitated the closing down of Numbers 4 and 7 shafts, until a new breaker can be built, and also a few days of idleness of the Hoyt shaft while a track could be laid to Number 14 breaker where the coal is being taken for preparation. The employes from Numbers 4 and 7 shafts were given employment in the other collieries of the Company.

SEVENTH DISTRICT

LUZERNE COUNTY

Wilkes-Barre, Pa., February 15, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith the annual report of the Seventh Anthracite District for the year ending December 31, 1914.

Respectfully submitted,

T. J. WILLIAMS,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	17
Number of mines,	49
Number of mines in operation,	49
Number of tons of coal shipped to market,	5,162,660
Number of tons used at mines for steam and heat,	556,571
Number of tons sold to local trade and used by employes,	308,825
Number of tons produced,	6,028,056
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	9,139
Number of persons employed outside,	2,445
Number of fatal accidents inside of mines,	51
Number of fatal accidents outside,	1
Number of non-fatal accidents inside of mines,	77
Number of non-fatal accidents outside,	6
Number of tons of coal produced per fatal accident inside,	118,197
Number of tons produced per fatal accident outside,	6,028,056
Number of tons produced per fatal accident inside and outside,	115,924
Number of persons employed per fatal accident inside,	179
Number of persons employed per fatal accident outside,	2,445
Number of persons employed per fatal accident inside and outside,	223
Number of persons employed per non-fatal accident inside,	119
Number of persons employed per non-fatal accident outside,	408
Number of persons employed per non-fatal accident inside and outside,	140
Number of wives made widows,	31
Number of children made orphans,	76
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	28
Number of compressed air locomotives used inside,	16
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	19
Number of electric motors used outside,	.....
Number of gasoline locomotives used inside,	.....
Number of fans in use,	46
Number of furnaces in use,	.....
Number of gaseous mines in operation,	44
Number of non-gaseous mines in operation,	5
Number of new mines opened,	2
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh and Wilkes-Barre Coal Company,	2,840,753
Lehigh Valley Coal Company,	1,988,165
Delaware and Hudson Company,	626,079
Red Ash Coal Company,	218,072
Wilkes-Barre Anthracite Coal Company,	204,653
Pittston Coal Mining Company,	122,097
Rissinger Brothers and Company, Incorporated,	28,237
Total,	6,028,056

Production by Counties

Luzerne,	6,028,056

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh and Wilkes-Barre Coal Co.,	24	.....	24	38	2	40	118,365	74,757	4,524	964	5,488	189	.....	119	482
Lehigh Valley Coal Co.,	16	1	17	23	.....	23	124,260	86,442	2,703	625	3,328	169	625	118	.....
Delaware and Hudson Co.,	3	.....	3	9	2	11	208,693	69,564	851	395	1,246	283	.....	95	198
Red Ash Coal Co.,	.....	.....	.....	4	2	6	.....	54,518	348	244	592	.....	.....	87	122
Wilkes-Barre Anthracite Coal Co.,	8	.....	8	1	.....	1	25,582	204,653	345	64	409	43	.....	345	.....
Pittston Coal Mining Co.,	.....	.....	.....	2	.....	2	.....	61,049	240	60	300	.....	.....	120	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	128	93	221	.....	.....	.....	.....
Totals and averages,	51	1	52	77	6	83	118,197	78,286	9,139	2,445	11,584	179	2,445	119	408

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	1	2	3	....	....	....	1	1	....	....	8	15.69
Falls of slate,	....	1	....	2	....	1	1	1	1	....	....	....	7	13.73
Falls of roof,	....	1	...	....	....	1	....	....	1	1	....	2	6	11.76
Mine cars,	....	1	....	2	....	....	....	2	....	1	....	1	7	13.73
Explosions of gas,	....	....	2	....	....	1	2	....	1	....	2	1	9	17.65
Explosions of powder and dynamite,	....	....	1	....	....	....	....	....	....	....	....	....	1	1.96
Blasts, premature and otherwise,	....	....	....	....	....	2	1	1	....	1	1	1	7	13.72
Falling into shafts,	....	....	1	....	....	....	....	....	....	....	....	....	1	1.96
Falling into slopes, etc.,	....	....	....	....	....	....	....	....	1	....	....	....	1	1.96
Mules,	....	1	....	....	....	....	....	....	....	....	....	....	1	1.96
Struck by timber,	1	....	....	....	....	....	....	....	....	....	....	1	2	3.92
By concussion,	1	....	....	....	....	....	....	....	....	....	....	....	1	1.96
Totals,	2	4	5	6	3	5	4	4	5	4	3	6	51	100.00
Outside														
Cars,	1	....	....	....	....	....	....	....	....	....	....	....	1	100.00
Totals,	1	....	....	....	....	....	....	....	....	....	....	....	1	100.00
Grand totals inside and outside,	3	4	5	6	3	5	4	4	5	4	3	6	52	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	1	2	....	....	3	....	1	....	1	1	2	2	13	16.88
Falls of slate,	....	....	....	1	....	....	....	1	....	1	....	....	3	3.89
Falls of roof,	1	2	1	....	1	1	....	....	....	1	....	....	7	9.09
Mine cars,	5	1	2	1	1	....	3	1	1	1	....	2	18	23.38
Explosions of gas,	....	....	2	....	....	....	1	....	2	....	4	1	10	12.99
Explosions of powder and dynamite,	....	....	1	....	....	....	....	....	....	....	1	....	2	2.60
Blasts, premature and otherwise,	1	3	1	....	1	....	2	1	1	1	2	2	15	19.48
Falling into slopes, etc.,	....	1	1	....	....	....	....	....	....	....	....	....	2	2.60
Mules,	....	....	....	....	....	....	....	....	....	1	....	....	1	1.30
Struck by timber,	....	....	....	....	....	....	....	....	....	....	1	....	1	1.30
Struck by piece of rock,	....	....	....	....	....	1	....	....	....	....	....	....	1	1.30
Struck by rope,	....	....	....	....	1	1	....	....	....	1	....	....	3	3.89
By falling,	1	....	....	....	....	....	....	....	....	....	....	....	1	1.30
Totals.	9	9	8	2	7	3	7	3	5	7	10	7	77	100.00
Outside														
Cars.	....	....	....	....	....	1	....	....	....	1	....	....	2	33.32
Struck by pipe,	....	....	....	....	....	....	....	....	....	1	....	....	1	16.67
Struck by frozen culm,	....	....	1	....	....	....	....	....	....	....	....	....	1	16.67
By falling,	....	1	....	....	....	....	....	....	....	....	....	....	1	16.67
Struck by frozen clay,	1	....	....	....	....	....	....	....	....	....	....	....	1	16.67
Totals.	1	1	1	....	....	1	....	....	....	2	....	....	6	100.00
Grand totals inside and outside.	10	10	9	2	7	4	7	3	5	9	10	7	83	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Assistant mine foremen,	....	....	....	....	....	....	....	....	1	....	....	....	1
Miners,	1	2	3	2	3	5	3	1	2	3	2	3	30
Miners' laborers,	1	1	1	2	....	....	1	1	2	....	1	2	12
Drivers and runners,	....	....	1	....	....	....	....	1	....	1	....	....	3
Doorboys and helpers,	....	1	....	....	....	....	....	....	....	....	....	....	1
Headmen,	....	....	....	....	....	....	....	....	....	....	....	1	1
Pipemen,	....	....	....	....	....	....	....	1	....	....	....	....	1
Footmen,	....	....	....	1	....	....	....	....	....	....	....	....	1
Motormen,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	2	4	5	6	3	5	4	4	5	4	3	6	51
Outside													
Laborers,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	1	....	....	....	....	....	....	....	....	....	....	....	1
Grand totals inside and outside,	3	4	5	6	3	5	4	4	5	4	3	6	52

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2	8	3	....	3	....	5	1	3	4	7	5	41
Miners' laborers,	3	....	4	1	3	1	2	1	1	1	3	....	20
Drivers and runners,	2	1	....	....	....	1	....	1	....	1	....	2	8
Doorboys and helpers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Footmen,	....	....	....	....	....	1	....	....	1	....	....	....	2
Oilers,	....	....	....	....	1	....	....	....	....	....	....	....	1
Headmen,	1	....	1	....	....	....	....	....	....	....	....	....	2
Motormen,	1	....	....	1	....	....	....	....	....	....	....	....	2
Totals,	9	9	8	2	7	3	7	3	5	7	10	7	77
Outside													
Brakemen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Motormen,	....	....	....	....	....	1	....	....	....	....	....	....	1
Slaters,	....	1	....	....	....	....	....	....	....	....	....	....	1
Laborers,	1	....	1	....	....	....	....	....	....	1	....	....	3
Totals,	1	1	1	....	....	1	....	....	....	2	....	....	6
Grand totals inside and outside,	10	10	9	2	7	4	7	3	5	9	10	7	83

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	1	1	....	....	....	....	1	1	....	....	4
English,	....	....	....	1	....	....	....	....	....	....	....	....	1
Welsh,	....	1	....	....	....	....	1	1	....	....	....	1	4
Irish,	1	....	....	....	....	....	....	....	....	....	....	....	1
German,	....	....	....	....	....	....	....	....	....	....	1	....	1
Polish,	....	2	3	2	....	2	2	2	2	1	2	2	20
Italian,	1	....	....	....	....	....	....	....	....	....	....	....	1
Slavonian,	....	....	1	....	....	....	....	....	....	1	....	1	3
Lithuanian,	....	....	....	1	2	3	....	....	1	1	....	1	9
Russian,	1	1	....	1	1	....	1	1	1	....	....	1	8
Totals,	3	4	5	6	3	5	4	4	5	4	3	6	52

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	3	....	2	1	1	3	....	....	1	2	1	1	15
English,	1	2	....	....	....	....	1	....	....	....	....	....	4
Welsh,	....	....	1	....	....	....	....	....	....	1	1	1	6
Irish,	....	1	....	....	....	....	1	2	....	....	1	....	5
German,	....	....	....	....	1	....	1	....	....	....	....	1	3
Polish,	2	4	2	....	2	1	1	....	2	3	5	1	23
Italian,	1	....	....	....	....	....	....	....	....	....	....	....	1
Slavonian,	1	....	1	....	....	....	....	....	1	1	1	1	6
Lithuanian,	1	1	2	....	3	....	1	1	....	2	1	....	12
Austrian,	....	....	....	....	....	....	....	....	....	....	....	1	1
Russian,	1	....	1	1	....	....	2	....	1	....	....	1	7
Totals,	10	10	9	2	7	4	7	3	5	9	10	7	83

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Lehigh and Wilkes-Barre Coal Co.															
Stanton No. 7 Colliery:															
Stanton (Empire), ...	Shaft, ...	Gaseous,	Fan, ...	24	8	6	68	1 3	Guibal, ..	Steam,.....	33	503,555	467,660	530,850	1,039
Stanton, ...	Shaft, ...			35	11.7	8.9	48	1.8							
Stanton, ...	Slope,....			34.5	11.9	8.4	48	1.8							
South Wilkes-Barre No. 5 Colliery:															
South Wilkes-Barre No. 1,	Shaft, ..	Gaseous, ..	Fan, ...	35	11.9	8.9	46	1.7	Guibal, ..	Steam,.....	45	468,630	383,430	517,300	981
South Wilkes-Barre No. 2,				35	11.9	8.9	46	1.7							
South Wilkes-Barre No. 3,				35	11.9	8.9	48	2.1							
South Wilkes-Barre No. 4,				35	11.9	8.9	48	2.1							
Maxwell No. 20 Colliery:															
Maxwell No. 1, ...	Slope,.....	Gaseous,	Fan, ...	25	8.2	6.3	42	1.9	Guibal, ...	Steam,.....	27	431,090	402,660	461,540	743
Maxwell No. 2, ...	Shaft,.....			25	8.2	6.3	42	1.9							
Maxwell No. 3, ...	Shaft, ...			35	11.9	8.9	45	1.3							
Maxwell No. 4, ...	Shaft, ...			35	11.9	8.9	45	1.3							
Hollenback No. 2 Colliery:															
Hollenback No. 1, ...	Shaft, ...	Gaseous,	Fan, ...	35	11.6	8.9	48	1.9	Guibal, ...	Steam,.....	17	293,000	264,660	341,650	708
Hollenback No. 2, ...	Slope,.....			24	7.11	6.	71	.9							
Hollenback No. 3, ...	Slope, ...			35	11.9	8.9	48	2.0							
Hollenback No. 4, ...	Shaft, ...			35	11.9	8.9	48	2.0							

Sugar Notch No. 9 Colliery:															
Sugar Notch No. 1,	Shaft,	Gaseous,	Fan,	20	6.8	5.	72	1.3	Guibal,	Steam,	14	370,400	315,096	464,200	528
Sugar Notch No. 2,	Tunnel,	Gaseous,	Fan,	24	8.	6.	60	1.3							
Lehigh Valley Coal Co.															
Dorrance Colliery:															
Baltimore,	Shaft,	Gaseous,	Fan,	28	8	8	60	1.9							
Hillman,	Shaft,	Gaseous,	2 Fans,	35	12	10.5	47	1.9	Guibal,	Steam,	12	225,700	187,750	254,480	450
				*30	10	8	54	1.9			10	152,400	134,870	171,630	224
											....	.....	.....	.....	.....
Henry Colliery:															
Baltimore,	Shaft,			30	10	8	54	2.7			6	105,885	58,196	120,059	133
Henry Five Foot,	Shaft,			28	6.6	7 6	46	1.6			4	84,288	81,094	101,494	142
Henry (Baltimore),	Shaft,	Gaseous,	Fan,	25	7	6	50	1.1	Guibal,	Steam,	8	84,833	75,370	100,317	129
Red Ash,	Shaft,			28	6.6	7.6	46	1.7			5	182,652	151,728	202,864	199
Hillman,	Slope,			20	6	5.8	60	.9			6	77,217	65,877	94,592	148
Prospect Colliery:															
Prospect,	Shaft,	Gaseous,	2 Fans,	25	9	8	53	1.8	Guibal,	Steam,	9	113,370	83,615	118,005	217
				30	9	8	53	1.8							
Oakwood,	Shaft,	Gaseous,	Fan,	30	9	8	50	1.8	Guibal,	Steam,	7	127,375	104,005	134,030	264
Midvale,	Slope,	Gaseous,	Fan,	20	6.6	5.3	66	1.2	Guibal,	Steam,	7	97,840	88,840	105,250	166
Franklin Colliery:															
Rock Slope,	Slope,	Gaseous,	Fan,	20	6	5.9	80	1.4	Guibal,	Steam,	5	105,000	101,500	108,500	188
Kidney Slope	Slope,	Gaseous,	Fan,	14	6	4	80	.8	Guibal,	Steam,	3	58,300	56,500	60,300	61
Sump and Baltimore,	Slope,	Non-gas.,	Steam jet,	.....	.....	.....	.....	.....	.....	.....	1	23,860	23,100	24,600	18
Franklin,	Drift,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	3	23,600	22,600	24,400	85
Warrior Run Colliery:															
Warrior Run No. 1,	Slope,	Gaseous,	Fan,	20	6	5	60	1.2	Guibal,	Steam,	6	99,400	125,180	105,400	109
Warrior Run No. 4,	Slope,	Gaseous,	Fan,	14	4	4	75	.7	Guibal,	Steam,	3	47,200	40,270	51,250	76
Delaware and Hudson Co.															
Baltimore No. 5 Colliery:															
Baltimore No. 2,				17.5	5.3	4.8	64	2.2	Guibal,	Steam,	4	126,385	108,895	141,975	176
Baltimore No. 5,				28	7	5.6	65	2.8	Guibal,	Steam,	5	192,605	168,050	207,130	213
Baltimore No. 5,	Shaft,	Gaseous,	Fan,	28	7	5.6	65	2.8							
Conyngham-Hillman,				20	5.8	5	78	1.8	Guibal,	Steam,	3	85,770	80,640	90,930	88
Conyngham-Baltimore,				17	5.4	4	90	1.7	Guibal,	Steam,	4	102,920	91,850	125,960	23
Baltimore Tunnel Colliery:															
Baltimore,	Shaft,	Gaseous,	Fan,	8	3	2.2	75	.8	Guibal,	Steam,	3	212,000	181,436	231,120	81
Baltimore,	Tunnel,	Gaseous,	Fan,	18	6	5	52	1.	Guibal,	Steam,	4	97,310	78,820	116,550	123
Red Ash Coal Co.															
Red Ash No. 2 Colliery:															
Red Ash No. 1,	Slope,	Non-gas.,	Fan,	15	4.9	3.9	78	1.5	Vulcan,	Steam,	3	38,000	37,000	46,000	228
Red Ash No. 2,	Slope,	Non-gas.,	Fan,	15	5	3.9	45	1.5	Vulcan,	Steam,	6	42,700	58,850	43,185	110
Red Ash No. 2,	Tunnel,	Non-gas.,													

*Emergency.

TABLE I.—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Wilkes-Barre Anthracite Coal Co.															
Hillman Vein Colliery:															
Hillman Vein, ...	Shaft, ...	Gaseous, ..	Fan, ...	30	9.9	8.8	54	1.	Tamaqua, ..	Steam,.....	3	117,000	97,000	123,000	345
Pittston Coal Mining Co.															
Hadleigh Colliery:															
Hadleigh, ...	Shaft, Slope, Drift,	Gaseous, ..	Fan, ...	16.6	4	5	65	.9	Guibal, ...	Steam,.....	3	45,000	38,000	50,000	240
Rissinger Brothers and Co., Inc.															
Miners Mills Colliery:															
Miners Mills No. 1, ...	Slope,.....	Gaseous, ..	Fan, ...	5.1	2.2	1.6	212	.4	Buffalo, ...	Electricity,.	1	29,000	29,000	29,300	33
Miners Mills No. 2, ...	Slope,.....	Gaseous, ..	Fan, ...	9.1	2.5	2	78	.1	Buffalo, ...	Electricity,.	2	31,300	31,300	35,900	41
Delaware, Lackawanna and Western Railroad Co.															
Pettebone No. 3 Colliery:															
Pettebone No. 3,†	Shaft, ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....
Pettebone No. 4,†	Shaft, ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....

†Sinking shafts.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh and Wilkes-Barre Coal Co.						
Stanton No. 7, ...						
South Wilkes-Barre No. 5,	Luzerne, ...	C. F. Huber, General Manager.	Wilkes-Barre, ...	E. J. Newbaker, ...	Wilkes-Barre, ...	C. R. R. of N. J.
Maxwell No. 20, ...						
Hollenback No. 2, ...						
Sugar Notch No. 9, ...						
Empire Washery, ...						
Lehigh Valley Coal Co.						
Dorrance, ...						
Henry, ...						
Prospect, ...	Luzerne, ...	Thomas Thomas, ...	Wilkes-Barre, ...	John H. Haertter, ...	Wilkes-Barre, ...	Lehigh Valley
Franklin, ...						
Warrior Run, ...						
Delaware and Hudson Co.						
Baltimore No. 5, ...						
Baltimore Tunnel, ...	Luzerne, ...	C. C. Rose, ...	Scranton, ...	E. R. Pettebone, ...	Dorranceton, ...	D. and H.
Baltimore Tunnel Washery,						
Red Ash Coal Co.						
Red Ash No. 2, ...	Luzerne, ...	T. F. Minford, ...	Wilkes-Barre, ...	T. F. Minford, ...	Wilkes-Barre, ...	C. R. R. of N. J.
Red Ash No. 2 Washery, ..						
Wilkes-Barre Anthracite Coal Co.						
Hillman Vein, ...	Luzerne, ...	Thomas H. Price, ...	Wilkes-Barre, ...	Thomas H. Price, ...	Wilkes-Barre, ...	Lehigh Valley
Pittston Coal Mining Co.						
Hadleigh, ...	Luzerne, ...	Charles M. O'Boyle,.	Sugar Notch, ...	William Mangan, ...	Sugar Notch, ...	C. R. R. of N. J.
Rissinger Brothers and Co., Inc.						
Miners Mills, ...	Luzerne, ...	H. E. Rissinger, ...	Pittston, ...	H. E. Rissinger, ...	Pittston, ...	Lehigh Valley
Delaware, Lackawanna and Western Railroad Co.						
Pettebone No. 3.*	Luzerne, ...	C. E. Tobey, ...	Scranton, ...	H. G. Davis, ...	Kingston, ...	D. L. and W.

*New mine.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Lehigh and Wilkes-Barre Coal Co.													
Stanton No. 7,	Luzerne,	639,764	50,644	23,660	713,068	244	1,458	8	14	606,250	29,074	19,475	156
South Wilkes-Barre No. 5,		536,778	46,826	112,684	696,288	251	1,404	5	8	451,325	19,387	106,422	139
Maxwell No. 20,		527,950	30,635	14,304	581,289	243	960	4	10	367,825	10,042	50,924	109
Hollenback No. 2,		376,421	36,777	60,136	473,334	249	926	5	5	412,675	15,673	30,631	98
Sugar Notch No. 9,		288,385	22,626	3,258	264,269	179	699	2	3	116,300	13,064	83,638	80
		2,313,298	195,908	213,042	2,722,248	.....	5,447	24	40	1,954,375	87,240	291,090	582
Empire Washery,	Luzerne,	117,595	910	.....	118,505	262	41	.....	.....	.....	.....	.....	6
Totals,		2,430,893	196,818	213,042	2,840,753	.....	5,488	24	40	1,954,375	87,240	291,090	588
Lehigh Valley Coal Co.													
Dorrance,	Luzerne,	456,721	53,921	44,869	555,511	229	808	3	10	406,325	49,376	1,578	73
Henry,		431,383	39,269	6,896	477,548	*	846	6	5	260,650	230,700	.....	138
Prospect,		412,387	59,462	.....	471,849	232	893	3	2	297,525	39,141	.....	103
Franklin,		287,668	41,643	5,221	333,932	232	557	3	5	210,475	19,444	43,891	95
Warrior Run,		128,391	19,631	1,303	149,325	*	224	2	1	71,700	8,276	4,925	31
Totals,		1,716,550	213,326	58,289	1,988,165	.....	3,328	17	23	1,246,675	346,937	50,394	440

*Coal is prepared at Prospect breaker.

Delaware and Hudson Co.													
Baltimore No. 5,	Luzerne,	356,999	22,266	4,930	384,195	237	871	2	5	281,026	5,568	.....	60
Baltimore Tunnel,		153,149	365	3,719	157,233	197	375	1	6	114,850	2,800	250	33
		510,148	22,631	8,649	541,428	.....	1,246	3	11	395,876	8,368	250	93
Baltimore Tunnel Washery,	Luzerne,	.....	84,651	.....	84,651	.....	†	.....	.....	.....	.....	.....	.....
Totals,		510,148	107,282	8,649	626,079	.....	1,246	3	11	395,876	8,368	250	93
Red Ash Coal Co.													
Red Ash No. 2,	Luzerne,	163,251	.....	5,441	168,692	184	592	.....	6	68,125	39,225	.....	53
Red Ash No. 2 Washery,		38,176	10,000	1,204	49,380								
Totals,		201,427	10,000	6,645	218,072	184	592	.....	6	68,125	39,225	.....	53
Wilkes-Barre Anthracite Coal Co.													
Hillman Vein,	Luzerne,	169,626	16,425	18,602	204,653	287	409	8	1	111,218	37,239	3,825	22
Pittston Coal Mining Co.													
Hadleigh,	Luzerne,	110,720	10,220	1,157	122,097	274	300	.....	2	40,000	8,650	68,500	16
Rissinger Brothers and Co., Inc.													
Miners Mills,	Luzerne,	23,296	2,500	2,441	28,237	143	129	.....	.....	50,000	.....	.....	11
Delaware, Lackawanna and Western Railroad Co.													
Pettebone No. 3,§	Luzerne,	.....	‡	.....	.....	.....	92	.....	.....	.....	27,725	.....	7
Grand totals,		5,162,660	556,571	308,825	6,028,056	.....	11,584	52	83	3,866,269	555,384	414,059	1,230

†Included with employes of Baltimore Tunnel.
‡3,451 tons shipped from other collieries.
§New mines. Sinking shafts.

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Lehigh and Wilkes-Barre Coal Co.,	Luzerne,	.....	.....	58	11,940	11,940	...	8	14	....	301	24,353	14	15,670	5,160	1	11
Lehigh Valley Coal Co.,		.....	.....	44	9,400	9,400	...	13	2	14	117	16,920	11	16,495	13,360	5	9
Delaware and Hudson Co.,		.....	.....	30	7,200	7,200	...	1	....	5	120	9,448	8	8,900	4,600	3	3
Red Ash Coal Co.,		.....	.....	3	900	900	...	6	....	....	20	984	3	1,550	950	.....	.....
Wilkes-Barre Anthracite Coal Co.,		.....	.....	4	2,000	2,000	...	....	....	....	13	2,270	2	1,200	1,000	2	2
Pittston Coal Mining Co.,		.....	.....	2	550	550	...	....	....	....	9	614	1	700	500	.....	.....
Rissinger Brothers and Co., Inc.,		.....	.....	2	180	180	...	....	....	....	2	90	.....	.....	.....	1	.....
Delaware, Lackawanna and Western Railroad Co.,		3	375	.....	.....	375	...	....	....	....	6	420	.....	.....	.....	.....	.....
Totals,		3	375	143	32,170	32,545	...	28	16	19	588	55,099	39	44,515	24,970	12	24

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh and Wilkes-Barre Coal Co.,		6	8	85	1,640	1,211	469	277	22	866	....	4,524	....	6	31	168	211	23	22	503	964	5,488
Lehigh Valley Coal Co.,		13	71	....	996	638	355	87	28	.....	515	2,703	....	5	45	111	44	12	14	394	625	3,328
Delaware and Hudson Co.,		3	2	11	216	326	100	3	13	157	20	851	....	4	21	69	31	54	4	212	395	1,246
Red Ash Coal Co.,		2	3	....	132	134	37	3	4	33	....	348	1	3	10	22	14	37	3	154	244	592
Wilkes-Barre Anthracite Coal Co.,	Luzerne, ...	3	4	2	92	103	50	15	9	14	53	345	1	1	5	12	5	1	5	34	64	409
Pittston Coal Mining Co.,		1	2	....	102	100	20	3	2	4	6	240	1	...	6	8	3	6	1	35	60	300
Rissinger Brothers and Co., Inc.,		2	1	....	25	22	8	....	1	15	....	74	1	1	4	5	18	....	2	24	55	129
Delaware, Lackawanna and Western Railroad Co.,		1	....	....	.....	.....	....	....	....	53	....	54	....	....	3	12	....	....	....	23	38	92
Totals,	.....	31	91	98	3,203	2,534	979	388	79	1,142	594	9,139	4	20	125	407	326	133	51	1,379	2,445	11,584

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Lehigh and Wilkes-Barre Coal Co.,	Luzerne,	23	22	20	21	21	19	12	12	18	24	20	21	233
Lehigh Valley Coal Co.,		15	18	17	21	22	24	17	18	19	24	21	20	231
Delaware and Hudson Co.,		19	17	15	18	18	19	18	19	22	16	18	18	217
Red Ash Coal Co.,		18	17	16	14	13	15	13	14	17	17	14	16	184
Wilkes-Barre Anthracite Coal Co.,		24	22	24	22	24	24	26	23	25	25	23	25	287
Pittston Coal Mining Co.,		24	20	23	22	24	24	23	21	25	25	20	24	274
Rissinger Brothers and Co., Inc.,		23	18	7	10	23	23	19	20	.....	.....	.....	.....	143

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 13	Michael Coputa, ...	Italian, ...	Laborer, ...	24	S.	....	....	Franklin, ...	Luzerne, ...	Fatally injured between car and platform. Outside.
18	Michael Polinski, ...	Russian, ...	Laborer, ...	28	M.	1	4	Henry, ...		Fatally injured on gangway by concussion from an explosion of powder.
26	James White, ...	Irish, ...	Miner, ...	50	M.	1	....	South Wilkes-Barre No. 5.		Killed by timber falling on him at face of chamber.
Feb. 4	Griffith Jones, ...	Welsh, ...	Laborer, ...	30	S.	....	....	Stanton No. 7, ...		Fatally injured by fall of roof at face of chamber.
10	Stiney McOblosky, ...	Polish, ...	Miner, ...	51	M.	1	2	Stanton No. 7, ...		Fatally injured by fall of slate in cross-cut.
24	John Skitibisky, ...	Polish, ...	Doorboy, ...	18	S.	....	....	Dorrance, ...		Fatally injured by being kicked in abdomen by mule on gangway.
25	John Ivoniski, ...	Russian, ...	Miner, ...	36	M.	1	4	Hillman Vein, ...		Fatally injured by cars on slope.
March 9	Peter Sokoski, ...	Polish, ...	Miner, ...	24	S.	....	....	Hillman vein, ..		Fatally burned by explosion of gas in chamber.
	Stanley Novack, ...	Polish, ...	Laborer, ...	25	S.	....	....			
17	Simon Dann, ...	American, ..	Driver, ...	50	M.	1	5	Henry, ...		Killed by falling down shaft.
24	John Poostic, ...	Slavonian, ..	Miner, ...	46	M.	1	....	Henry, ...		Fatally burned by explosion of powder in cross-cut.
25	Frank Kortz, ...	Polish, ...	Miner, ...	48	M.	1	2	Hillman Vein, ...		Killed by fall of coal in chamber.
April 14	George Alberts, ...	American, ..	Mucorman, ..	22	S.	....	....	Prospect, ...		Fatally injured by cars on gangway.
15	John Gill, ...	Polish, ...	Miner, ...	26	M.	1	3	Baltimore No. 5, .		Killed by fall of coal at face of chamber.
18	Stanley Ford, ...	English, ...	Footman, ...	23	S.	....	....	Hollenback No. 2,		Instantly killed by cars on slope.
22	Anthony Worthumeicz,	Lithuanian,	Miner, ...	50	M.	1	....	South Wilkes-Barre No. 5.		Killed by fall of coal at face of chamber.
25	John Kalushin, ...	Russian, ...	Laborer, ...	38	M.	1	....	Prospect, ...		Killed by fall of slate at face of chamber.
	John Sawnoski, ...	Polish, ...	Laborer, ...	23	M.	1	1	Henry, ...		Killed by fall of slate at face of airway.
May 1	John Somnick, ...	Russian, ...	Miner, ...	35	S.	....	....	Baltimore No. 5, .		Killed by fall of coal at face of chamber.
11	Peter Yannska, ...	Lithuanian,	Miner, ...	30	M.	1	....	Franklin, ...		Killed by fall of coal at face of chamber.
27	Steine Ambroaz, ...	Lithuanian,	Miner, ...	43	M.	1	4	Maxwell No. 20, ..		Killed by fall of coal at face of chamber.
June 2	Joseph Morris, ...	Lithuanian,	Miner, ...	48	S.	....	....	Sugar Notch No. 9,		Killed by premature blast at face of chamber.
8	William Peczulis, ...	Lithuanian,	Miner, ...	30	S.	....	....	Maxwell No. 20, ..		Killed by explosion of blast at face of chamber.
12	William Tinitas, ...	Lithuanian,	Miner, ...	57	M.	1	1	Hollenback No. 2,		Fatally burned by explosion of gas at face of chamber.
13	Martin Sonck, ...	Polish, ...	Miner, ...	38	M.	1	5	Stanton No. 7, ...		Killed by fall of slate at pillar work.

TABLE 4 --Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
June 25	Stanley Lavendosky, .	Polish,.....	Miner, ...	28	M.	1	2	Henry, ...		Killed by fall of roof at face of chamber.
July 8	George Nicklos, ...	Polish,.....	Miner, ...	29	M.	1	3	Stanton No. 7,..		Fatally burned by explosion of gas in
	Joseph Yuonits, ...	Polish,.....	Laborer, ...	33	S.	....	....	)		abandoned chamber.
27	Steven Ronbish, ...	Russian, ...	Miner, ...	30	M.	1	4	Prospect, ...		Killed by fall of slate at face of chamber.
31	Lewis Roberts, ...	Welsh,.....	Miner, ...	50	M.	1	1	Borrance, ...		Killed by explosion of blast at face of chamber.
Aug. 4	Charles Kovinski, ...	Russian, ...	Laborer, ...	21	S.	....	....	Hollenback No. 2,		Killed by fall of slate at face of chamber.
5	Paul Kolar, ...	Polish,.....	Miner, ...	25	M.	1	1	Hillman Vein, ...		Killed by explosion of blast at face of chamber.
13	John P. Williams,....	Welsh,.....	Fireman, ...	30	M.	1	2	South Wilkes-Barre No. 5.		Killed by cars on slope.
14	John Trawoski, ...	Polish,.....	Driver, ...	22	S.	....	....	Maxwell No. 20,..		Fatally injured by cars on gangway.
Sept. 5	Frank Wazniak, ...	Russian, ...	Laborer, ...	30	M.	1	...	Hollenback No. 2,		Killed by fall of slate at face of chamber.
8	Mathias Waghtcavage,	Lithuanian,	Miner, ...	39	M.	1	8	Franklin, ...		Killed by fall of coal at face of chamber.
22	James B. Higgins, ...	American,..	Assistant foreman.	51	M.	1	1	South Wilkes-Barre No. 5.		Killed by falling down manway.
23	Michael Bleaky, ...	Polish,.....	Miner, ...	27	M.	1	1	Warrior Run, ...	Luzerne, ...	Killed by fall of roof at face of chamber.
28	Bruno Kargoskie, ...	Polish,.....	Laborer, ...	22	S.	....	....	Henry, ...		Fatally injured by explosion of gas in chamber.
Oct. 2	Michael Metro, ...	Polish,.....	Miner, ...	29	S.	....	....	Hillman Vein, ...		Killed by fall of coal at face of chamber.
10	Charles Jackson, ...	American,..	Driver, ...	16	S.	....	....	Stanton No. 7, ...		Instantly killed by cars on gangway.
21	Joseph Gameskie, ...	Lithuanian,	Miner, ...	30	S.	...	....	Stanton No. 7, ...		Killed by explosion of blast at face of chamber.
27	George Novak, ...	Slavonion,..	Miner, ...	37	M.	1	4	Warrior Run, ...		Killed by fall of roof on gangway.
Nov. 7	Joseph Gabler, ...	German,....	Miner, ...	40	M.	1	5	Baltimore Tunnel,		Killed by explosion of blast at face of chamber.
16	Barney Fsenofski, ...	Polish,.....	Laborer, ...	23	S.	....	....	Stanton No. 7, ...		Fatally burned by explosion of gas on plane.
24	Adam Jolty, ...	Polish,.....	Miner, ...	33	M.	1	3	Maxwell No. 20,..		Fatally burned by explosion of gas at face of chamber.
Dec. 1	Daniel McCourbert, ..	Polish,.....	Headman, ..	28	S.	....	....	Borrance, ...		Killed by timber falling on him on slope.
2	Buny Kowski, ...	Russian, ...	Miner, ...	22	S.	....	....	Hollenback No. 2,		Fatally burned by explosion of gas in chamber.
7	John Huritz, ...	Polish,.....	Laborer, ...	34	M.	1	4	Hillman Vein, ...		Killed by cars on slope.
8	Edward Parry, ...	Welsh,.....	Miner, ...	42	M.	1	3	Hillman Vein, ...		Killed by fall of roof at face of chamber.
11	Stanley Andrewsavage,	Lithuanian,	Laborer, ...	24	S.	....	....	South Wilkes-Barre No. 5.		Killed by fall of roof on gangway.
30	Walter Alboszta, ...	Slavonian,..	Miner, ...	28	M.	1	3	Sugar Notch No. 9,		Killed by explosion of blast at face of chute.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 3	John Knot, ...	English, ...	Laborer, ...	52	M.	Baltimore No. 5,.....	Luzerne, ...	Wrist fractured by falling from platform on gangway.
5	Martin Logolis, ...	Lithuanian,	Miner, ...	52	M.	Stanton No. 7,.....		Compound fracture of leg by premature blast at face of chamber.
8	Alexander Growsky, ..	Polish,.....	Laborer, ...	23	S.	Hillman Vein, ...		Leg fractured by fall of roof at face of chamber.
10	Anthony Burke, ...	American, ..	Headman, ...	21	S.	Sugar Notch No. 9,.....		Leg fractured by cars on slope.
13	Neil O'Brien, ...	American, ..	Motorman, ...	24	S.	Dorrance, ...		Ankle fractured by cars on gangway.
17	John Propovitch	Slavonian,..	Laborer, ...	32	M.	Red Ash No. 2,.....		Leg fractured by frozen clay rolling on him. Outside.
20	Sebastian Ceccacci, ...	Italian, ...	Driver, ...	18	S.	Henry, ...		Thigh fractured by cars on gangway.
	Bruno Andrewscavage,	Polish,.....	Miner, ...	22	S.	Franklin, ...		Hips bruised by cars on gangway.
22	George Kruck, ...	Russian, ...	Laborer, ...	30	S.	Stanton No. 7,.....		Ankle fractured by fall of coal at face of chamber.
28	Owen Gallagher, ...	American, ..	Runner, ...	29	S.	Franklin, ...		Hand crushed by cars on gangway.
Feb. 4	Morris Owens, ...	Welsh,.....	Miner, ...	49	M.	Stanton No. 7,.....		Leg fractured by fall of roof at face of chamber.
5	Ignatz Mashuskie, ...	Lithuanian,	Miner, ...	45	M.	Stanton No. 7,.....		Hip dislocated by falling down chamber.
	Edward Pomnckti, ..	Polish,.....	Miner, ...	36	M.			Ribs fractured by fall of coal at face of chamber.
	Alexander Wizask,..	Polish,.....	Miner, ...	33	M.	Maxwell No. 20, ...		Back injured by fall of coal at face of chamber.
	George Oko, ...	Polish,.....	Miner, ...	33	M.	Baltimore No. 5,.....		Leg fractured by explosion of blast at face of chamber.
12	Abram Dunston, ...	English, ...	Miner, ...	60	M.	Baltimore Tunnel,.....		Arm fractured by explosion of blast at face of chamber.
	David O. Thomas, ...	Welsh,.....	Miner, ...	45	M.	Red Ash No. 2,.....		Foot crushed by fall of roof at face of chamber.
25	Peter McManaman, .	Irish	Slater, ...	70	S.	Maxwell No. 20,.....		Collar bone broken by falling in breaker. Outside.
28	Richard J. Stevens, ..	English, ...	Driver, ...	18	S.	South Wilkes-Barre No. 5.		Leg fractured by cars on gangway.
	Alexander Merlonis, ..	Polish,.....	Miner, ...	32	M.	Maxwell No. 20,.....		Arm fractured by explosion of blast in cross-cut.
March 4	George Derick.	Russian, ...	Laborer, ...	22	M.	Red Ash No. 2,.....		Leg fractured by being struck by frozen culm. Outside.

TABLE 5—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
March 16	Raoman Tibets, ...	Polish,.....	Miner, ...	40	M.	Hadleigh, ...		Skull fractured by falling down chamber.
17	William X. Williams,	Welsh,.....	Laborer, ...	52	M.	Hollenback No. 2,.....		Fingers crushed by cars on gangway.
20	Joseph Stanalines, ..	Lithuanian,	Miner, ...	33	S.	Sugar Notch No. 9,..		Face and hands burned by explosion of gas in chamber.
	Thomas Krochnas, ..	Lithuanian,	Laborer, ...	23	S.			Face and hands burned.
21	Stanley Yonock, ...	Polish,.....	Miner, ...	35	M.	Dorrance, ...		Ribs fractured by explosion of blast at face of chamber.
24	Michael Poostic, ...	Slavonian,..	Laborer, ...	23	S.	Henry, ...		Seriously burned by explosion of powder in cross-cut.
	Joseph Daniels, ...	American,..	Headman, ...	29	S.	South Wilkes-Barre No. 5,		Legs fractured by cars in tunnel.
27	Thomas Bona, ...	American,..	Laborer, ...	22	M.	Stanton No. 7,.....		Arm fractured by fall of roof at face of gangway.
April 8	Stanley Fisher, ...	American,..	Motorman, ...	21	S.	Maxwell No. 2,.....		Wrist fractured by cars on gangway.
17	Charles Kidder, ...	Russian, ...	Laborer, ...	24	M.	Dorrance, ...		Leg fractured by fall of slate at face of chamber.
May 2	Andrew Shiffhauer, ...	German,....	Laborer, ...	52	M.	Baltimore Tunnel,.....	Luzerne, ...	Leg fractured by fall of coal at face of chamber.
3	William Povelanis, ...	Lithuanian,	Laborer, ...	27	S.	Hollenback No. 2,.....		Leg fractured by fall of coal at face of chamber.
5	Frank Razolski, ...	Polish,.....	Miner, ...	40	M.	Henry, ...		Back bruised by fall of coal at face of chamber.
5	James S. Thomas, ...	American,..	Miner, ...	58	M.	South Wilkes-Barre No. 5,		Ribs fractured by explosion of blast at face of chamber.
18	Anthony Vitches, ...	Lithuanian,	Laborer, ...	36	M.	Stanton No. 7,.....		Arm fractured by a rope on slope.
25	George Koons, ...	Lithuanian,	Miner, ...	41	M.	Red Ash No. 2,.....		Arm fractured by fall of roof at face of chamber.
27	Felix Tanski, ...	Polish,.....	Oiler, ...	16	S.	Hadleigh, ...		Leg fractured by cars on gangway.
June 11	James Campbell, ...	American,..	Runner, ...	30	S.	Dorrance, ...		Rib fractured by a rope on plane.
13	Michael Lesnock, ...	Polish,.....	Laborer, ...	34	M.	Warrior Run, ...		Leg fractured by fall of roof at face of chamber.
18	George Wood, ...	American,..	Motorman, ...	18	S.	Stanton No. 7,.....		Leg fractured by cars while branching them. Outside.
22	Frank Besil, ...	American,..	Footman, ...	30	M.	Prospect, ...		Seriously injured by a piece of rock falling down shaft.
July 2	Michael Stienshak, ...	Russian, ...	Laborer, ...	33	M.	Red Ash No. 2,.....		Leg fractured by cars on slope.

July	9	Edward Mason, ...	English, ...	Laborer, ...	34	M.	Franklin, ...			Body bruised by fall of coal at face of chamber.
	16	Gustav Gabel, ...	German, ...	Laborer, ...	28	M.	South Wilkes-Barre No. 5.			Pelvis fractured by cars on slope.
	22	Stanley Chills, ...	Russian, ...	Miner, ...	26	S.	Prospect, ...			Seriously burned by explosion of gas at face of chamber.
	24	Owen Coyle, ...	Irish, ...	Miner, ...	65	M.	South Wilkes-Barre No. 5.			Ribs fractured by explosion of blast at face of chamber.
	27	William Vinscavage, .	Lithuanian,	Miner, ...	61	M.	Red Ash No. 2, ...			Collar bone fractured by cars at face of chamber.
	31	Frank Moyavich, ...	Polish, ...	Miner, ...	30	S.	Dorrance, ...			Leg fractured by explosion of blast at face of chamber.
Aug.	5	James Kittrick, ...	Irish, ...	Driver, ...	17	S.	Hollenback No. 2, ...			Collar bone fractured by cars on gangway.
	11	Kalikstas Zovablis, ...	Lithuanian,	Laborer, ...	24	S.	Hollenback No. 2, ...			Skull fractured by fall of slate at face of chamber.
	21	Charles O'Donnell, ...	Irish, ...	Miner, ...	53	M.	South Wilkes-Barre No. 5.			Seriously injured by explosion of blast at face of chamber.
Sept.	3	David Watkins, ...	American, ..	Footman, ...	22	S.	Baltimore No. 5, ...			Leg fractured by cars at foot of shaft.
	10	Martin Laweus, ...	Russian, ...	Laborer, ...	38	M.	Baltimore Tunnel, ...			Hip dislocated by fall of coal at face of chamber.
	15	Edward Kokolowskie, ..	Polish, ...	Miner, ...	35	M.	Maxwell No. 20, ...			Arm fractured by explosion of blast at face of chamber.
	23	Stephen Janko, ...	Slavonian, ..	Miner, ...	55	M.	Baltimore No. 5, ...			Seriously injured by explosion of gas at face of chamber.
	28	Walter Kaminisky, ...	Polish, ...	Miner, ...	35	M.	Henry, ...			Seriously injured by explosion of gas in chamber.
Oct.	5	Michael Barrett, ...	American, ..	Brakeman, ...	34	S.	Baltimore Tunnel, ...			Ankle fractured by cars. Outside.
	6	Joseph Benney, ...	Lithuanian,	Miner, ...	33	M.	South Wilkes-Barre No. 5.			Collar bone fractured by explosion of blast at face of chamber.
	7	Thomas Heffron, ...	American, ..	Laborer, ...	24	S.	Baltimore Tunnel, ...	Luzerne, ...		Foot crushed by being struck by a pipe. Outside.
		Joseph Adams, ...	Lithuanian,	Laborer, ...	42	M.	South Wilkes-Barre No. 5.			Nose fractured by being kicked by a mule that he was passing on gangway.
	16	William D. Joseph, ...	Welsh, ...	Miner, ...	52	M.	Stanton No. 7, ...			Arm fractured by fall of coal at face of gangway.
		Joseph Ohick, ...	Slavonian, ..	Miner, ...	36	M.	Dorrance, ...			Leg fractured by fall of slate at face of chamber.
	19	Julius Kobeskie, ...	Polish, ...	Doorboy, ...	17	S.	Henry, ...			Leg fractured by cars on plane.
	23	Ignatz Sharbowskie, ..	Polish, ...	Miner, ...	32	M.	Stanton No. 7, ...			Leg fractured by fall of roof at face of chamber.
	24	Frank Drose, ...	Polish, ...	Driver, ...	19	S.	Stanton No. 7, ...			Leg fractured by a rope on slope.
Nov.	5	Michael Cudick, ...	Slavonian, ..	Miner, ...	30	M.	Hollenback No. 2, ...			Burned about head by explosion of gas in chamber.
	9	John Boyle, ...	Irish, ...	Laborer, ...	31	S.	Baltimore No. 5, ...			Scalp lacerated by fall of coal at face of chamber.
	13	David R. Williams, ..	Welsh, ...	Miner, ...	56	M.	Maxwell No. 20, ...			Arm fractured by explosion of blast at face of chamber.
	16	George Torpin, ...	Polish, ...	Miner, ...	45	M.	Stanton No. 7, ...			Slightly burned by explosion of gas on No. 17 plane.
		Stanley Daniels, ...	Polish, ...	Miner, ...	30	M.				
	19	Adam Gurbish, ...	Polish, ...	Laborer, ...	27	S.	Franklin, ...			Hand shot off by explosion of dynamite in chamber.
	21	Jacob Mitz, ...	American, ..	Miner, ...	54	M.	Baltimore Tunnel, ...			Rib fractured by prop falling on him in chamber.
	23	Andrew Woldereych, .	Polish, ...	Miner, ...	25	M.	Stanton No. 7, ...			Leg fractured by explosion of blast in cross-cut.

TABLE 5—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Nov. 24	Michael Mazakle, ...	Polish,.....	Laborer, ...	22	S.	Maxwell No. 20,.....	Luzerne, ...	Face and hands burned by explosion of gas in chamber.
25	Michael Miller, ...	Lithuanian,	Miner, ...	43	M.	Dorrance, ...		Leg fractured by fall of coal at face of chamber.
Dec. 5	George Selp, ...	Austrian, ..	Miner, ...	37	M.	Franklin, ...		Leg fractured by fall of coal at face of chamber.
7	James Rielly, ...	American,..	Runner, ...	30	S.	Dorrance, ...		Hand crushed by cars in chamber.
11	Joseph Bersefskie, ...	Polish,.....	Miner, ...	28	M.	Dorrance, ...		Back bruised by explosion of blast in chamber.
12	John Gwynn, ...	Welsh,.....	Miner, ...	40	M.	Maxwell No. 20,.....		Body bruised by fall of coal at face of chamber.
15	John Zeinion, ...	Slavonian,..	Driver, ...	22	S.	Dorrance, ...		Hips squeezed by car on airway.
23	George Kozlinskie, ...	German,....	Miner, ...	35	M.	Stanton No. 7,.....		Back bruised by explosion of blast at face of chamber.
29	Alexander Gedroi, ...	Russian, ...	Miner, ...	25	S.	Maxwell No. 20,.....		Face and hands burned by explosion of gas at face of chamber.

CONDITION OF COLLIERIES

LEHIGH AND WILKES-BARRE COAL COMPANY

Stanton No. 7, South Wilkes-Barre No. 5, Maxwell No 20, Hollenback No. 2, and Sugar Notch No. 9.—Ventilation, roads, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Dorrance, Henry, Prospect, Franklin and Warrior Run.—Ventilation, roads, drainage and condition as to safety, good.

DELAWARE AND HUDSON COMPANY

Baltimore No. 5 and Baltimore Tunnel.—Ventilation, roads, drainage and condition as to safety, good.

RED ASH COAL COMPANY

Red Ash No. 2.—Ventilation, roads, drainage and condition as to safety, good.

WILKES-BARRE ANTHRACITE COAL COMPANY

Hillman Vein.—Ventilation, drainage and condition as to safety, good.

PITTSTON COAL MINING COMPANY

Hadleigh.—Ventilation, roads, drainage and condition as to safety, good.

RISSINGER BROTHERS AND COMPANY, INCORPORATED

Miners Mills.—Ventilation, drainage and roads, fair. Condition as to safety, good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone No. 3.—New mine. Sinking shafts.

IMPROVEMENTS

LEHIGH AND WILKES-BARRE COAL COMPANY

Stanton No. 7 Colliery.—Inside: Completed tunnel, Abbott to Abbott, 6th East, No. 4 slope; No. 17 tunnel, Abbott to Kidney; No. 32 tunnel, Skidmore to Hillman; and tunnel, Hillman to Top Stanton, No. 6 Plane West. Installed two 14-inch by 8-inch by 18-inch pumps in Nos. 2 and 3 slopes; also compressed air haulage on Empire No. 4 shaft level. Remodeled shaft level barn.

South Wilkes-Barre No. 5 Colliery.—Completed No. 30 tunnel, Baltimore to Baltimore; No. 31 tunnel, Kidney to Kidney; Rock Plane airway, Top Baltimore to Five Foot, 2nd West No. 2 slope. Installed 14 inch by 8 inch by 18 inch pump in No. 4. slope.

Maxwell No. 20 Colliery.—Completed No. 29 tunnel, Hillman to Kidney; tunnel, Hillman to Hillman, 2nd South, No. 10 slope; tunnel Red Ash to Red Ash, No. 21 tunnel west; tunnel, Five Foot to Baltimore, No. 27 tunnel east; tunnel, Hillman to Hillman, 1st South, No. 10 slope; two tunnels, Bottom to Top Red Ash, No. 20 tunnel east. Remodeled the Red Ash shaft level barn and built a new barn in No. 5 slope.

Hollenback No. 2 Colliery.—Completed No. 38 tunnel, Top Red Ash to Ross. Installed 16 inch by 8 inch by 18 inch pump in No. 2 slope extension. Outside: Installed an air compressor.

Sugar Notch No. 9 Colliery.—Completed Nos. 27 and 30 tunnels, Bottom to Top Red Ash. Outside: Remodeled the breaker.

LEHIGH VALLEY COAL COMPANY

Dorrance Colliery.—No 23 tunnel, 200 feet long, was driven from the Cooper to the Bennet vein through the fault. No. 24 tunnel from the Cooper to the Lance vein was started and driven about 20 feet. Three concrete overcasts in No. 24 slope district, Red Ash vein, were completed. A new Jeanesville pump in the Baltimore vein was placed in operation. An engine was installed at head of No. 21 plane. The engine at the head of No. 21 slope, Hillman vein, was relocated and a fireproof room is being constructed. An engine was installed at the head of No. 25 slope, Red Ash vein, and a fireproof engine room was constructed. The Red Ash barn was extended by the addition of five concrete stalls. The motor from West plane was transferred to the head of the Five Foot plane.

Outside: A new steel fuel line is being constructed from the breaker to the boiler house. Work has been started on the installation of an additional 300 H. P. boiler plant. A concrete driveway was laid through the colliery yard. A powder house was constructed of metal lath and plastered on the inside as also on the outside. A concrete and terra cotta tile office was built. A new crusher, elevator and engine and fireproof engine house were installed on the ash line from the boiler house to the bore hole. Concrete retaining walls were built along the tail tracks. A fireproof engine house was erected over the conveyor engine under breaker. The shaft tower was braced and concrete pillars placed under the columns.

Henry Colliery.—Inside: No. 74 tunnel, from the Hillman to the Bowkley driven 370 feet. A new concrete hospital is in course of construction. A concrete roof was placed over pumpway in Red Ash vein. Completed manway to No. 28 slope. Started slope in Red Ash vein west to the shaft.

Outside: Mine tracks were regraded from hoisting shaft to colliery fence and a concrete retaining wall built alongside of the tracks. A new brick blacksmith shop was erected. The Henry Five Foot, Baltimore and Wyoming Baltimore fan houses were made fireproof. The reservoir was fenced in. A new road was laid through colliery yard. Feed water regulators and Watts pump governors were installed in the boiler house. A 10-inch bore hole was drilled from the surface to the Five Foot vein and the old culm bank is being flushed into the workings.

Prospect Colliery.—Inside: Installed a Scranton pump in Hillman vein. All refuse from the breaker and boilers is now silted into the mine workings. An 8-inch bore hole was drilled from the Abbott

to Hillman vein to conduct steam pipes. A 6-inch bore hole from the Abbott to Bowkley and a 6-inch bore hole from Bowkley to Hillman vein were drilled so as to concentrate drainage at Midvale in the Hillman vein. The placing of concrete and steel roof supports at the foot of the Red Ash was started. An electric hoist was installed at foot of slopes Nos. 26, 28 and 29. Installed an air compressor at head of No. 4 plane. A concrete overcast was constructed in Red Ash vein.

Outside: The Midvale Abbott fan house was reconstructed of reinforced concrete. One Gates crusher, two Williams pulverizers and an 18 inch by 30 inch engine were installed under the breaker to crush refuse before flushing into the mine workings. A shaft was sunk from the surface to Hillman. A concrete and terra cotta ditch was constructed from the breaker to the shaft to conduct refuse from the breaker into the mines. A 16-inch bore hole was drilled from the surface to the Hillman vein, a depth of 520 feet, and 12-inch column line installed for discharge from the new pump in the Midvale-Hillman vein. A spray system for fire protection was installed in the breaker and pump placed in the boiler house to pump water from the reservoir to head of breaker. Seven Simplex jigs were installed in the breaker. Installed a 125 K. V. A., Allis-Chalmers, 220 volt engine, which will furnish light for Dorrance, Prospect and Henry collieries, and the new office building of the Company.

Franklin Colliery.—Inside: Completed No. 30 tunnel, Baltimore to Sump vein. Started No. 14 rock plane, Red Ash to Top Red Ash; No. 15 plane, Skidmore to Baltimore vein. Completed concrete fire boss station on No. 9 slope, and one in No. 6 tunnel.

Outside: A new fireproof engine house of concrete and terra cotta tile was constructed for the Rock slope. A mess and wash-house of concrete and hollow tile was also constructed for employes. The tile shop and office were completed. Concrete foundations for installation of a new Multi-vane steel fan and engine house at the Red Ash shaft were completed. The exhaust from the breaker engine was conducted into the feed water heater in the boiler house. Driveways under breaker were paved with brick. A 20-inch bore hole for discharge from the Worthington pump has been drilled.

Warrior Run Colliery.—Inside: No. 30 rock plane was driven from Five Foot to the Hillman vein for ventilation and second opening. An engine was installed in the Mills vein to handle coal from the west side of No. 22 tunnel. A drift was driven from the surface into the "E" vein.

Outside: The "B" slope engine house, inside slope engine house and compressor house were made fireproof with metal lath and plaster. Foundation walls under the boiler house were reinforced. Two new fireproof foremen's offices were erected.

DELAWARE AND HUDSON COMPANY

Baltimore No. 5 Colliery.—Completed tunnel, through anticlinal, Baltimore to Baltimore vein; electric locomotive road through fault in Red Ash vein on shaft level; 6-inch bore hole, 267 feet deep, Hillman to Baltimore vein at Conyngham. Installed an 8-inch centrifugal 1,500 gallon Sludge Pump on surface. Washery refuse from Baltimore No. 5 to Conyngham for inside filling.

WILKES-BARRE ANTHRACITE COAL COMPANY

Hillman Vein Colliery.—Completed slope from Hillman to Kidney vein, intercepting Abbott vein; Rock slope from Ross and Red Ash veins, and started development in the Abbott vein. Concrete lining placed in landing at shaft in upper Hillman level, and stable made fireproof.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone No. 3 Colliery.—Shafts Nos. 3 and 4 have been sunk a depth of 270 feet and 954 feet, respectively. The trestle work connecting these shafts with the Pettebone breaker, on the west side of the Susquehanna river, is completed.

Installed duplicate ventilating fans, shaft hoisting engines; and both shafts have been equipped with steel towers.

EIGHTH DISTRICT

LUZERNE AND LACKAWANNA COUNTIES

Pittston, Pa., February 23, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith the annual report of the Eighth Anthracite District for the year ending December 31, 1914.

Yours respectfully,

S. J. JENNINGS, Inspector.

17—21—1915.

SUMMARY OF STATISTICS

Number of collieries,	15
Number of mines,	32
Number of mines in operation,	27
Number of tons of coal shipped to market,	3,421,663
Number of tons used at mines for steam and heat,	422,182
Number of tons sold to local trade and used by employes,	100,028
Number of tons produced,	3,943,873
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	46,342
Number of persons employed inside of mines,	6,704
Number of persons employed outside,	2,001
Number of fatal accidents inside of mines,	35
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	57
Number of non-fatal accidents outside,	6
Number of tons of coal produced per fatal accident inside,	112,682
Number of tons produced per fatal accident outside,	1,971,936
Number of tons produced per fatal accident inside and outside,	106,591
Number of persons employed per fatal accident inside,	191
Number of persons employed per fatal accident outside,	1,000
Number of persons employed per fatal accident inside and outside,	235
Number of persons employed per non-fatal accident inside,	118
Number of persons employed per non-fatal accident outside,	333
Number of persons employed per non-fatal accident inside and outside,	138
Number of wives made widows,	19
Number of children made orphans,	55
Number of steam locomotives used inside of mines,	2
Number of steam locomotives used outside,	12
Number of compressed air locomotives used inside,	6
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	31
Number of electric motor used outside,	.....
Number of gasoline locomotives used inside,	.....
Number of fans in use,	33
Number of furnaces in use,	.....
Number of gaseous mines in operation,	17
Number of non-gaseous mines in operation,	10
Number of new mines opened,	.....
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Valley Coal Company,	1,645,312
Kingston Coal Company,	626,744
Forty Fort Coal Company,	587,415
Mt. Lookout Coal Company,	374,653
East Boston Coal Company,	210,955
Plymouth Coal Company,	202,279
Raub Coal Company,	147,881
Delaware, Lackawanna and Western Railroad Company,	119,860
Rissinger Brothers and Company, Incorporated,	28,774
Total,	3,943,873

Production by Counties

Luzerne,	3,832,050
Lackawanna,	111,823
Total,	3,943,873

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh Valley Coal Co.,	14	.....	14	27	.....	27	117,522	60,937	2,411	746	3,157	172	.....	89	.....
Kingston Coal Co.,	6	.....	6	1	.....	1	104,457	626,744	950	318	1,268	158	.....	950	.....
Forty Fort Coal Co.,	3	.....	3	5	2	7	195,805	117,483	1,128	322	1,450	376	.....	225	161
Mt. Lookout Coal Co.,	2	.....	2	3	.....	3	187,326	124,884	683	156	839	341	.....	227	.....
East Boston Coal Co.,	2	2	4	6	2	8	105,477	35,159	400	131	531	200	65	67	65
Plymouth Coal Co.,	2	.....	2	11	.....	11	101,139	18,389	400	130	530	200	.....	36	.....
Raub Coal Co.,	4	.....	4	4	2	6	36,970	36,970	377	123	500	94	.....	94	61
Delaware, Lackawanna and Western Railroad Co.,	2	.....	2	.....	.....	.....	59,930	.....	279	38	317	139	.....	.....	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	76	37	113	.....	.....	.....	.....
Totals and averages,	35	2	37	57	6	63	112,682	69,191	6,704	2,001	8,705	191	1,000	118	333

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	....	....	....	....	....	....	2	....	....	2	5.71
Falls of slate,	....	....	....	....	1	....	....	....	....	....	1	....	2	5.71
Falls of roof,	2	1	1	2	1	....	....	3	1	3	....	....	14	40.00
Mine cars,	1	....	....	....	1	....	....	....	....	1	....	2	5	14.29
Blasts, premature and otherwise,	1	....	....	2	2	....	1	2	....	....	....	2	10	28.57
Falling into shafts,	....	....	....	....	....	1	1	....	....	....	....	....	2	5.72
Totals,	4	1	1	4	5	1	2	5	1	6	1	4	35	100.00
Outside														
Cars,	....	....	....	....	....	....	....	....	....	1	....	....	1	50.00
Machinery,	....	....	....	....	1	....	....	....	....	....	....	....	1	50.00
Totals,	....	....	....	....	1	....	....	....	....	1	....	....	2	100.00
Grand totals inside and outside,	4	1	1	4	6	1	2	5	1	7	1	4	37	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	....	1	1	....	....	....	1	....	....	3	5.26
Falls of roof,	1	1	....	....	....	1	2	1	4	....	....	....	10	17.55
Mine cars,	3	1	....	1	....	1	1	3	3	3	1	....	17	29.83
Explosions of gas,	....	....	....	....	2	....	....	1	1	....	....	....	4	7.02
Blasts, premature and otherwise,	1	1	2	1	1	1	1	....	2	2	3	....	15	26.32
Falling,	....	....	....	....	....	....	1	....	....	1	....	....	2	3.51
Falling timber,	....	....	....	1	....	....	....	....	....	....	....	....	1	1.75
Mules,	....	....	....	....	....	....	....	1	....	....	....	....	1	1.75
Machinery,	....	....	....	....	....	....	1	....	....	....	....	....	1	1.75
Shaft cages,	1	....	....	....	....	1	....	....	....	....	....	....	2	3.51
Shaft fans,	1	....	....	....	....	....	....	....	....	....	....	....	1	1.75
Totals,	7	3	2	3	4	5	6	6	10	7	4	....	57	100.00
Outside														
Cars,	1	....	....	....	....	....	....	....	....	....	1	....	2	33.34
Blasting caps,	....	....	....	....	....	....	....	....	....	....	1	....	1	16.66
Haulage rope,	....	....	....	1	....	....	1	....	....	....	....	....	2	33.33
Falling,	....	....	....	....	....	....	....	1	....	....	....	....	1	16.67
Totals,	1	....	....	1	....	....	1	1	....	....	2	....	6	100.00
Grand totals inside and outside,	8	3	2	4	4	5	7	7	10	7	6	....	63	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Assistant mine foremen,	....	....	....	....	....	....	....	1	....	....	....	....	1
Miners,	3	1	1	2	3	....	1	3	1	3	....	2	20
Miners' laborers,	1	....	....	....	1	....	....	....	....	2	1	....	5
Drivers and runners,	....	....	....	1	....	....	....	....	....	....	....	1	2
Assistant surveyors,	....	....	....	....	....	....	....	1	....	....	....	....	1
Track helpers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Machinist helpers,	....	....	....	....	1	....	....	....	....	....	....	....	1
Footmen,	....	....	....	....	....	1	1	....	....	....	....	1	3
Rock unloaders,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	4	1	1	4	5	1	2	5	1	6	1	4	35
Outside													
Runners,	....	....	....	....	....	....	....	....	....	1	....	....	1
Engineers and firemen,	....	....	....	....	1	....	....	....	....	....	....	....	1
Totals,	....	....	....	....	1	....	....	....	....	1	....	....	2
Grand totals inside and outside,	4	1	1	4	6	1	2	5	1	7	1	4	37

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months.												
	January	February	March	April	May	June	July	August	September	October	November	December.	Totals
Inside													
Mine foremen,	....	....	....	....	....	....	....	....	1	....	....	....	1
Motormen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Headmen,	....	....	....	....	....	....	....	....	1	....	....	....	1
Miners,	2	1	1	2	2	3	4	2	4	2	2	....	25
Miners' laborers,	2	1	1	....	1	....	....	....	3	3	1	....	12
Drivers and runners,	1	....	....	1	....	1	....	4	1	1	....	....	9
Doorboys and helpers,	....	....	....	....	....	....	1	....	....	....	....	....	1
Machinist helpers,	....	....	....	....	....	....	1	....	....	....	....	....	1
Trackmen,	....	....	....	....	1	....	....	....	....	....	....	....	1
Driver bosses,	....	1	....	....	....	....	....	....	....	....	....	....	1
Machine runners,	1	....	....	....	....	....	....	....	....	....	....	....	1
Footmen,	1	....	....	....	....	1	....	....	....	....	1	....	3
Totals,	7	3	2	3	4	5	6	6	10	7	4	....	57
Outside.													
Foremen,	....	....	....	....	....	....	....	1	....	....	....	....	1
Drivers,	....	....	....	....	....	....	1	....	....	....	....	....	1
Runners,	....	....	....	....	....	....	....	....	....	....	1	....	1
Trackmen,	....	....	....	....	....	....	....	....	....	....	1	....	1
Laborers,	....	....	....	1	....	....	....	....	....	....	....	....	1
Loaders,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	1	....	....	1	....	....	1	1	....	....	2	....	6
Grand totals inside and outside,	8	3	2	4	4	5	7	7	10	7	6	....	63

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	....	....	1	....	....	1	....	2	....	2	6
Welsh,	....	....	....	....	2	....	....	1	....	....	....	....	3
German,	....	....	1	....	....	....	....	....	....	....	....	....	1
Polish,	2	....	....	3	1	....	1	2	....	....	....	1	10
Italian,	1	1	....	1	....	....	....	....	....	1	....	....	4
Slavonian,	....	....	....	....	....	....	....	....	....	....	1	....	1
Lithuanian,	....	....	....	....	2	....	....	1	1	....	....	1	5
Austrian,	....	....	....	....	....	....	1	....	....	....	....	....	1
Russian,	1	....	....	....	....	....	....	....	....	3	....	....	4
Horwat,	....	....	....	....	....	1	....	....	....	1	....	....	2
Totals,	4	1	1	4	6	1	2	5	1	7	1	4	37

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	1	....	....	....	....	....	....	....	2	....	....	4
Welsh,	....	....	....	....	....	....	....	....	....	....	1	....	1
Scotch,	....	....	....	....	....	....	....	....	1	....	....	....	1
Irish,	1	....	....	....	1	1	....	1	....	....	1	....	5
German,	....	....	....	....	....	1	....	1	....	....	....	....	2
Polish,	3	....	....	....	....	2	4	....	4	....	3	....	16
Italian,	....	1	....	1	....	....	1	1	2	....	....	....	6
Slavonian,	1	....	....	3	....	1	1	3	1	1	1	....	12
Lithuanian,	....	1	2	....	1	....	....	1	1	....	....	....	6
Russian,	1	....	....	....	2	....	....	....	....	2	....	....	5
Horwat,	1	....	....	....	....	....	1	....	....	2	....	....	4
Bohemian,	....	....	....	....	....	....	....	....	1	....	....	....	1
Totals,	8	3	2	4	4	5	7	7	10	7	6	....	63

TABLE I —Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Lehigh Valley Coal Co.																
Exeter Colliery:																
Red Ash,	Shaft, ...	Gaseous, ..	2 Fans,	20	6.8	5.10	80	.8	Guibal, ...	Steam,....	..	4	96,056	47,780	100,911	116
				20	6.8	5.10	76	1.6			..	5	106,714	74,805	124,993	163
Pittston,			Fan, ...	20	5.11	5.11	65	.8			..	4	75,883	66,694	80,699	142
Knight,			Fan, ...	20	6.11	6.7	75	1			..	5	135,168	120,877	143,396	177
Maltby Colliery:																
No. 2,	Shaft, ...	Gaseous, ..	2 Fans, ..	25	8.11	6.10	72	3	Guibal, ...	Steam,....	..	10	158,760	128,694	188,250	507
				20	5.11	5.8	82	2.5								
Four Foot,	Tunnel, ...	Non-gas., .	Fan, ...	12	4.	4.	82	.5	Guibal, ...	Steam,.....	..	2	64,075	47,820	66,480	18
William A. Colliery:																
William A.,	Shaft, ...	Non-gas., .	Fan, ...	18	5.3	5.9	75	.7	Guibal, ...	Steam,....	..	4	60,000	59,300	60,400	75
Lawrence,			Fan, ...	18	5.3	5.9	75	.7			..	6	56,000	55,600	56,500	86
Babylon,			Fan, ...	20	5.3	5.9	80	1.			..	4	77,000	66,000	80,000	122
No. 10,	Tunnel, ...	Non-gas., .	Fan, ...	8.6	3.8	2.3	200	1.2			..	4	56,000	58,000	58,000	120
Seneca Colliery:																
Twin,	Shaft, ...	Gaseous, ..	Fan, ...	24	8.	6.	74	2.2	Guibal, ...	Steam,....	..	5	150,000	90,000	165,000	218
Coxey,			Fan, ...	20	6.	6.	80	1.2			..	4	92,000	75,000	104,000	172
Pittston,			Fan, ...	20	6.	6.	50	.8			..	1	40,000	18,000	41,000	38
Westmoreland Colliery:																
No. 1,	Tunnel, ...	Gaseous, ..	Fan, ...	20	6.	6.	79	2.	Guibal, ...	Steam,.....	..	5	113,000	95,000	117,000	274
Stevens Colliery:																
No. 2,	Shaft, ...	Gaseous, ..	Fan, ...	20	6.	7.	70	1.	Guibal, ...	Steam,....	..	3	59,560	41,500	60,400	56
No. 1,			Fan, ..	20	5.	6.	65	1.			..	3	61,000	44,900	62,500	85

Kingston Coal Co.																
Kingston No. 4 Colliery:																
No. 1,	Shaft,	Gaseous,	2 Fans,	25	8.	8.	74	2.5	Guibal,	Steam,	..	9	250,599	231,873	260,594	512
				25	8.	8.	80	2.5								
No. 2,			2 Fans,	25	8.	8.	80	2.5			..	8	165,280	140,300	198,268	438
				25	8.	8.	80	2.5								
Forty Fort Coal Co.																
Harry E. Colliery:																
No. 1,	Shaft, ..	Gaseous, ..	Fan, ...	25	8.	6.10	75	2.	Guibal, ...	Steam, ...	..	12	273,400	255,600	274,300	589
Baby,	Tunnel, .		Fan, ...	13.4	3.8	3.2	85	1.								
Forty Fort Colliery:																
No. 1,	Shaft, ...	Gaseous, ..	2 Fans, ..	20	7.	6.8	95	2.2	Guibal, ...	Steam, ...	..	11	172,500	147,560	198,200	539
				20	7.	6.	90	1.8								
Mt. Lookout Coal Co.																
Mt. Lookout Colliery:																
No. 1,	Shaft, ...	Gaseous, ..	2 Fans, ..	20	7.	6.10	82	1.5	Guibal, ...	Steam, ...	..	15	168,600	147,300	178,600	683
				20	6.4	5.4	82	1.6								
East Boston Coal Co.																
East Boston Colliery:																
No. 1,	Shaft, ...	Gaseous, ..	Fan, ...	25	7.	7.	65	1.5	Guibal, ...	Steam, ...	..	10	163,000	134,800	165,000	400
Plymouth Coal Co.																
Black Diamond Colliery:																
No. 1,	Shaft, ...	Gaseous, ..	Fan, ...	20	6.	6.6	90	1.9	Vulcan, ...	Steam, ...	..	8	125,000	115,000	129,000	400
Raub Coal Co.																
Louise Colliery:																
Mt. Thomas,	Tunnel, ...	Non-gas., .	Fan, ...	13	5.	5.	120	.8	Guibal, ...	Steam, ...	..	3	29,600	28,900	31,700	125
Nine Foot,			Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	13,200	12,600	13,800	11
Klondike,			Natural,	.....	.....	.....	.....	.....	.....	.....	..	4	27,700	26,100	29,200	112
Ross,	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	2	14,900	13,700	15,500	41
Sand,	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	2	29,700	28,800	30,800	51
Red Ash,	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	1	15,000	14,500	15,700	37
Delaware, Lackawanna and Western Railroad Co.																
Pettebone Colliery:																
No. 1,	Shaft, ...	Gaseous, ..	Fan, ...	35	10.1	9.1	52	2.3	Dickson, ..	Steam, ...	..	10	173,300	150,100	202,600	278
No. 2,			Fan, ...	22	6.2	6.	120	1.7								
Rissinger Brothers and Co., Inc.																
Troy Colliery:																
No. 1,	Tunnel, ...	Non-gas., .	Fan, ...	7.6	3.6	3.3	220	.4	Buffalo, ...	Electricity, .	..	3	13,300	14,000	14,500	76

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Valley Coal Co.						
Exeter,	Luzerne,	Thomas Thomas,	Wilkes-Barre,	William D. Owens,	Pittston,	Lehigh Valley
Maltby,	Luzerne,					
William A.,	Luzerne,					
	Lackawanna,					
Seneca,	Luzerne,					
Westmoreland,	Luzerne,					
Stevens,	Luzerne,					
Kingston Coal Co.						
Kingston No. 4,	Luzerne,	F. E. Zerby,	Wilkes-Barre,	Thomas H. Williams,	Kingston,	D. L. and W., D. and H., L. V., Penna., and C. R. R. of N. J.
Forty Fort Coal Co.						
Harry E.,	Luzerne,	Frank H. Hemelright,	Scranton,	James J. McCarty,	Luzerne,	Lehigh Valley
Forty Fort,	Luzerne,					
Mt. Lookout Coal Co.						
Mt. Lookout,	Luzerne,	Frank H. Hemelright,	Scranton,	Seward Button,	Wyoming,	D. L. and W. and L. V.
East Boston Coal Co.						
East Boston,	Luzerne,	W. T. Payne,	Kingston,	Peter Henderson,	Luzerne,	D. L. and W., L. V. and Penna.
Plymouth Coal Co.,						
Black Diamond,	Luzerne,	Gilbert S. Jones,	Dorranceton,	Gilbert S. Jones,	Dorranceton,	D. L. and W. and L. V.
Raub Coal Co.						
Louise,	Luzerne,	Gwillym Edwards,	Luzerne,	Gwillym Edwards,	Luzerne,	D. L. and W. and L. V.
Delaware, Lackawanna and Western Railroad Co.						
Pettebone,	Luzerne,	C. E. Tobey,	Scranton,	H. G. Davis,	Kingston,	D. L. and W.
Rissinger Brothers and Co., Inc.						
Troy,	Luzerne,	H. E. Rissinger,	Pittston,			Lehigh Valley

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Lehigh Valley Coal Co.													
Exeter,	Luzerne,	343,109	48,099	25,745	416,953	238	765	5	5	181,100	259,300	.....	131
Maltby,	Luzerne,	293,306	36,887	7,310	337,503	236	670	1	10	230,000	158,425	.....	96
William A.,	Lackawanna, .. / Luzerne, ...	250,452	30,705	8,656	289,813	236	610	3	2	262,000	8,012	.....	85
Seneca,	Luzerne,	235,012	33,107	6,918	275,037	227	561	3	5	377,450	12,275	.....	85
Westmoreland,	Luzerne,	188,472	14,450	6,602	209,524	229	364	1	2	82,025	147,375	.....	36
Stevens,	Luzerne,	87,676	28,806	.....	116,482	236	187	1	3	9,300	38,813	.....	32
Totals,		1,398,027	192,054	55,231	1,645,312	.....	3,157	14	27	1,141,875	624,200	.....	465
Kingston Coal Co.													
Kingston No. 4,	Luzerne	566,944	50,000	9,800	626,744	269	1,268	6	1	572,225	2,975	24,525	127
Forty Fort Coal Co.													
Harry E.,	Luzerne	270,237	27,386	3,629	301,252	236	743	2	4	237,975	79,025	.....	91
Forty Fort,	Luzerne,	261,405	21,197	3,561	286,163	225	707	1	3	228,825	102,825	.....	93
Totals,		531,642	48,583	7,190	587,415	.....	1,450	3	7	466,800	181,850	.....	184
Mt. Lookout Coal Co.													
Mt. Lookout,	Luzerne,	323,855	46,010	4,788	374,653	274	839	2	3	240,400	185,400	.....	36
East Boston Coal Co.													
East Boston,	Luzerne,	152,409	22,849	5,913	181,171	168	504	4	8	151,950	16,225	3,450	78
East Boston Washery,	Luzerne,	15,764	13,761	259	29,784	294	27	.....	.....	.....	.....	.....	.....
Totals,		168,173	36,610	6,172	210,955	.....	531	4	8	151,950	16,225	3,450	78

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Plymouth Coal Co. Black Diamond,	Luzerne,	167,165	30,000	5,114	202,279	269	530	2	11	81,250	50,500	.....	58
Raub Coal Co. Louise,	Luzerne,	121,238	16,425	10,218	147,881	254	500	4	6	88,375	24,550	16,050	34
Delaware, Lackawanna and Western Railroad Co. Pettebone,	Luzerne,	119,860	.....	.....	119,860	253	317	2	.....	86,750	.....	50,110	39
Rissinger Brothers and Co., Inc. Troy,	Luzerne,	24,759	2,500	1,515	28,774	150	113	.....	.....	9,775	29,000	.....	9
Grand totals,		3,421,663	422,182	100,028	3,943,873	.....	8,705	37	63	2,839,400	1,114,700	94,135	1,030

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Lehigh Valley Coal Co.,	Luzerne, Lackawanna,	.....	.....	39	12,033	12,033	6	6	16	126	12,314	28	31,258	18,844	8	2
Kingston Coal Co.,	Luzerne,	.....	.....	14	3,900	3,900	1	.....	4	29	4,325	7	8,600	5,100	4	1
Forty Fort Coal Co.,	Luzerne,	.....	.....	14	3,600	3,600	2	.....	1	41	3,590	8	6,600	4,200	.....	.....
Mt. Lookout Coal Co.,	Luzerne,	.....	.....	10	2,600	2,600	1	.....	9	29	2,100	3	6,750	2,900	3	3
East Boston Coal Co.,	Luzerne,	.....	.....	11	2,202	2,202	.....	.....	.....	27	1,258	2	4,500	2,000	1	2
Plymouth Coal Co.,	Luzerne,	.....	.....	15	2,600	2,600	1	.....	1	43	3,000	3	2,800	2,000	2	3
Raub Coal Co.,	Luzerne,	.....	.....	7	1,200	1,200	2	.....	.....	29	1,670	3	1,000	600	.....	.....
Delaware, Lackawanna and Western Railroad Co.,	Luzerne,	.....	.....	10	1,350	1,350	1	.....	.....	29	2,861	2	160	160	1	.....
Rissinger Brothers and Co., Inc.,	Luzerne,	.....	.....	2	120	120	.....	.....	.....	3	100	2	120	120	.....	.....
Totals,	.....	.....	.....	122	29,605	29,605	14	6	31	356	31,218	58	61,788	35,924	19	11

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh Valley Coal Co...	Lackawanna, Luzerne, ...	11	36	25	1,060	494	314	31	46	394	....	2,411	....	5	86	116	64	9	18	448	746	3,157
Kingston Coal Co., ...		2	8	11	326	299	141	16	13	22	112	950	1	1	40	33	....	49	5	189	318	1,268
Forty Fort Coal Co.,....		2	7	11	427	327	148	34	19	57	96	1,128	2	2	31	37	40	61	5	144	322	1,450
Mt. Lookout Coal Co.,....		2	...	4	239	278	25	13	10	43	69	683	1	1	14	25	6	26	3	80	156	839
East Boston Coal Co.,....		1	3	7	100	80	84	6	8	98	13	460	1	3	20	20	44	....	5	38	131	531
Plymouth Coal Co.,.....		1	3	3	110	90	50	8	6	87	43	400	....	1	11	20	29	3	3	63	130	530
Raub Coal Co.....	Luzerne, ...	3	4	1	159	108	50	6	9	7	30	377	1	1	11	20	22	3	3	62	123	500
Delaware, Lackawanna and Western Railroad Co., ...		1	....	3	82	80	24	7	1	....	81	279	....	1	4	11	....	....	1	21	38	317
Rissinger Brothers and Co., Inc., ...		1	....	....	25	25	11	1	2	7	4	76	1	1	4	3	11	4	1	12	37	113
Totals	.....	24	60	65	2,528	1,781	847	122	114	715	448	6,704	7	16	221	285	216	155	44	1,057	2,001	8,705

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Lehigh Valley Coal Co.,	Lackawanna, Luzerne,	15	13	18	21	22	23	16	18	23	24	20	20	233
Kingston Coal Co.,	Luzerne,	24	19	19	22	24	23	20	22	24	26	22	24	269
Forty Fort Coal Co.,		15	13	1	21	21	23	23	22	23	24	21	23	230
Mt. Lookout Coal Co.,		23	14	22	24	24	25	25	19	25	26	23	24	274
East Boston Coal Co.,		18	15	15	12	12	12	13	11	13	15	15	17	168
Plymouth Coal Co.,		23	22	24	21	21	22	24	23	22	24	21	22	269
Raub Coal Co.,		26	23	24	13	15	17	20	22	24	24	22	24	254
Delaware, Lackawanna and Western Railroad Co.,		18	15	9	23	23	25	21	24	25	25	23	22	253
Rissinger Brothers and Co., Inc.,		21	18	4	10	21	21	20	20	15	.....	.....	.....	150

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 16	Paul Barnosky, ...	Polish,.....	Miner, ...	36	M.	1	2	Kingston No. 4,.	Luzerne,.....	Fatally injured by fall of roof at face of chamber.
24	Frank Perzine, ...	Italian,.....	Miner, ...	40	M.	1	3	Louise, ...	Luzerne,.....	Fatally injured at face of gangway while re-opening a rock hole that missed fire.
29	Edward Kozelsky, ...	Polish,.....	Miner, ...	35	M.	1	1	William A., ...	Lackawanna,...	Fatally injured by mine car on gangway.
	Charles Pefskie, ...	Russian,....	Laborer, ...	30	M.	1	2	Maltby, ...		Instantly killed by fall of rock at face of chamber.
Feb. 14	Case Mendala, ...	Italian,.....	Miner, ...	34	M.	1	3	Mt. Lookout, ..		Fatally injured by fall of roof at face of cross-heading.
March 17	Andrew Schonick, ...	German,....	Miner, ...	46	S.	....	....	Louise, ...		Instantly killed by fall of roof at face of chamber.
April 15	John Buchenskie, ...	Polish,.....	Runner, ...	19	S.	....	....	Seneca, ...		Fatally injured by coal from a blast at face of chamber.
17	Anthony Clemish, ...	Polish,.....	Miner, ...	45	M.	1	1	Louise		Instantly killed by fall of roof at face of pillar.
18	Lewis Gerescani, ...	Italian,.....	Miner, ...	30	M.	1	1	East Boston, ...		Instantly killed by blast at face of cross-heading.
27	George Slaskie, ...	Polish,.....	Rock unloader,	47	M.	1	8	Forty Fort, ...		Fatally injured by fall of roof in old chamber.
May 8	{ Anthony Alexis, ..	Lithuanian,	Laborer, ...	40	M.	1	....	Seneca, ...	} Luzerne,....	{ Fatally injured at face of chamber while tamping a rock hole. The charge consisted of black powder, dynamite and a detonator, which they were pushing into the hole with a common steel-pointed needle.
	{ George Mazaitus, ..	Lithuanian,	Miner, ...	40	M.	1	6			
14	George Smith, ...	American,..	Engineer, ...	45	M.	1	....	East Boston, ...		Instantly killed by compressor engine. Outside.
19	William Najako, ...	Polish,.....	Miner, ...	45	M.	1	6	Kingston No. 4,.		Fatally injured by fall of dividing slate at face of chamber.
20	Jenkin Jones, ...	Welsh,.....	Machinist helper.	34	S.	....	....	Black Diamond,		Instantly killed by runaway car on slope.
23	Jefferson Dodd, ...	Welsh,.....	Miner, ...	30	S.	....	....	Kingston No. 4,.		Instantly killed by fall of roof at face of chamber.
June 20	Martin Vucich, ...	Horwat,....	Footman, ...	25	S.	....	....	East Boston, ...		Instantly killed by falling off cage in hoisting shaft.

July	23	Thomas Negiock, ...	Austrian, ...	Footman, ...	21	S.	....	....	Pettebone, ...	Luzerne, ...	Instantly killed by falling into hoisting shaft.
	27	John Gadorsky, ...	Polish, ...	Miner, ...	36	S.	....	....	Exeter, ...		Instantly killed at face of gangway while reopening a hole that had missed fire.
Aug.	4	William Davidson, ..	Polish, ...	Miner, ...	36	M.	1	6	Exeter, ...		Fatally injured by fall of roof at face of chamber.
	7	Julius Koseck, ...	Polish, ...	Miner, ...	66	S.	....	....	Louise, ...		Fatally injured by blast at face of chamber.
	12	George Thomas, ...	Welsh, ...	Assistant foreman.	65	S.	....	....	William A., ...	Lackawanna, ...	Instantly killed by fall of roof on gangway, while engineering corps was surveying. The assistant foreman examined the roof and thought it safe. The piece that fell was very large.
		George Gray, ...	American, ..	Assistant surveyor.	20	S.	....	....			
	25	John Latonick, ...	Lithuanian,	Miner, ...	58	M.	1	....	Kingston No. 4, .		Instantly killed by blast at face of cross-heading.
Sept	3	Joseph Bernotovich, ..	Lithuanian,	Miner, ...	46	M.	1	....	Exeter, ...		Fatally injured by fall of roof at face of chamber.
Oct.	2	Leo Pero, ...	American, ..	Runner, ...	18	S.	....	....	East Boston, ...		Fatally injured by brake stick while running cars from breaker to the siding. Outside.
	10	Peter Mashkauner, ..	Russian, ...	Miner, ...	45	M.	1	7	Stevens, ...		Instantly killed by fall of coal at face of pillar.
	13	John Pointon, ...	American, ..	Track helper,	23	S.	....	....	Westmoreland, .		Fatally injured between motor and door on gangway.
	14	Onefre Slepic, ...	Russian, ...	Laborer, ...	20	S.	....	....	Harry E., ...		Instantly killed by fall of roof at face of chamber.
	20	Peter Yanch, ...	Italian, ...	Miner.	32	S.	....	....	Mt. Lookout, ...	Luzerne, ...	Fatally injured by fall of roof at face of gangway.
	21	Anthony Nelanskie, .	Russian, ...	Laborer, ...	20	S.	....	....	Exeter, ...		Instantly killed by fall of roof at face of gangway.
	23	Mike Mashic, ...	Norwat, ...	Miner, ...	33	M.	1	2	Black Diamond,		Instantly killed by coal falling off pillar at face of chamber.
Nov.	19	John Gotenskie, ...	Slavonian, ..	Laborer, ...	20	S.	....	....	Harry E., ...		Fatally injured by fall of dividing slate at face of chamber.
Dec.	7	Chester Jones, ...	American, ..	Miner, ...	38	M.	1	....	Exeter, ...		Fatally injured while forcing a charge of powder into hole at face of chamber.
		Ignatz Sawkofski, ...	Polish, ...	Miner, ...	34	M.	1	3	Kingston No. 4, .		Instantly killed by blast at face of chamber.
	15	Paul Shopanis, ...	Lithuanian,	Footman, ...	36	M.	1	4	Kingston No. 4, .		Instantly killed by cars at foot of shaft.
	17	Michael Brislin, ...	American, ..	Driver, ...	19	S.	....	....	Pettebone, ...		Instantly killed by cars on gangway.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 7	John Allabauh, ...	American...	Footman, ...	35	M.	Black Diamond,		Wrist broken. He attempted to throw fans in position while cage was descending.
14	Michael Evanovitch, ..	Horwat, ...	Laborer, ...	30	M.	Black Diamond,		Skull slightly fractured. He attempted to get on cage after the signal had been given to the engineer.
19	Louis Machont, ...	Polish,.....	Loader, ...	20	S.	Louise, ...		Arm fractured by railroad cars at breaker. Outside.
22	Charles Kochen, ...	Polish,.....	Machine runner, ...	30	M.	Mt. Lookout, ..		Compound fracture of foot. He was struck by mine cars on main gangway.
26	Roman Ginasky, ...	Polish,.....	Miner, ...	34	S.	Exeter, ...		Leg fractured by blast at face of chamber.
27	Adam Lavendosky, ..	Russian, ...	Miner, ...	28	S.	East Boston, ...		Leg broken while uncoupling cars at face of airway.
29	Edward Martin, ...	Irish, ...	Runner, ...	24	S.	Kingston No. 4,		Head severely injured. While riding upon a car loaded with rock his head struck an obstruction along an abandoned chamber road.
	Andrew Kolessar, ...	Slavonian, ..	Laborer, ...	20	S.	Harry E., ...	Luzerne,....	Thigh fractured by fall of roof at face of chamber.
Feb. 13	August Conrad, ...	Lithuanian,	Laborer, ...	41	S.	Black Diamond,		Leg broken by fall of roof at face of pillar.
20	Thomas Evans, ...	American,..	Driver-boss, ...	40	M.	East Boston, ...		Hip dislocated by cars on gangway.
26	Sam. Ross, ...	Italian, ...	Miner, ...	43	M.	Westmoreland, .		Face and hands lacerated by blast at face of chamber.
March 10	Joseph Jecket, ...	Lithuanian,	Miner, ...	35	M.	East Boston, ...		Leg broken by blast at face of chamber.
27	Anthony Zeberskie, ..	Lithuanian,	Laborer, ...	25	M.	Maltby, ...		Thigh injured by blast at face of chamber.
April 11	Frank Adament, ...	Slavonian, ..	Driver, ...	19	S.	Black Diamond,		Collar bone and three ribs fractured by cars on gangway.
15	John Rookie, ...	Slavonian, ..	Laborer, ...	19	S.	East Boston, ...		Ankle dislocated by being struck by rope at breaker. Outside.
22	Nerine Norroseno, ...	Italian, ...	Miner	31	M.	Exeter, ...		Face, chest and arms lacerated by blast at face of chamber.
29	Larry Shultz, ...	Slavonian, ..	Miner, ...	48	M.	Maltby, ...		Arm broken. He was knocked off platform by falling timber on gangway.
May 5	Thomas Greegus, ...	Lithuanian,	Miner, ...	35	M.	Black Diamond,		Face and arms burned by gas at face of chamber.
6	Thomas Duritus, ...	Russian, ...	Miner, ...	34	M.	Stevens, ...		Arm broken by blast at face of pillar.

May	19	Michael Holidick	Russian, ...	Laborer, ...	45	M.	Black Diamond.			Bone in foot fractured by fall of coal at face of chamber.
	22	John Mooney, ...	Irish, ...	Trackman, ...	40	M.	Black Diamond			Face and hands burned by gas at face of old chamber.
June	2	Joseph Voytek, ...	Slavonian, .	Driver, ...	20	S.	Forty Fort, ...			Collar bone fractured by cars on main gangway.
	3	Jacob Crossnuck, ...	German, ...	Miner, ...	55	M.	Black Diamond,			Bone in foot fractured by fall of rock at face of chamber.
	16	James Alchonis, ...	Polish, ...	Miner, ...	40	M.	Stevens, ...			Two ribs fractured by fall of coal at face of chamber.
	20	Martin Finnerty, ...	Irish, ...	Footman, ...	32	M.	East Boston, ...			Ankle bone broken. Cage caught in shaft and threw him down.
	25	George Urak, ...	Polish, ...	Miner, ...	42	M	Maltby, ...			Hip and side injured by blast at face of chamber.
July	2	Joseph Macik, ...	Horwat, ...	Machinist helper, ...	32	M	East Boston, ..			Wrist bone broken when chain tongs slipped.
	16	Edward Jerneskie, ..	Polish, ...	Miner, ...	44	M	Seneca, ...			Leg broken by fall of roof at face of pillar.
	20	Finanzo Febero, ...	Italian, ...	Miner, ...	28	M	Louise, ...			Leg cut off by fall of rock at face of chamber.
	27	Joseph Huntz, ...	Polish, ...	Doorboy, ...	17	S.	Westmoreland, .			Arm broken. Fell on rail on gangway road.
		Joseph Crzesowsky, ..	Polish, ...	Miner, ...	30	M	Exeter, ...			Head lacerated and hip injured by blast at face of chamber.
	31	Stephen Lipko, ...	Slavonian, .	Driver, ...	20	S.	Louise, ...			Leg broken by being struck by rope on trestle. Outside.
		Joseph Yarzrek, ...	Polish, ...	Miner, ...	29	M.	Black Diamond,			Foot injured by mine car at face of slope.
Aug.	3	John M. Callaghan, ..	Irish, ...	Foreman, ...	47	S.	Forty Fort, ...			Leg fractured. Fell from railroad car at breaker. Outside.
	6	John Stash, ...	Slavonian, .	Driver, ...	17	S.	Maltby, ...	Luzerne, ...		Chest injured by cars on gangway.
	7	George Kologo, ...	Slavonian, .	Driver, ...	21	S.	Maltby, ...			Face lacerated. Kicked by mule.
	11	Coone Foe, ...	German, ...	Miner, ...	29	M.	Louise, ...			Shoulder bone dislocated by fall of roof at face of chamber.
	19	Lewis Pezenski, ...	Italian, ...	Miner, ...	25	S.	Exeter, ...			Arms burned by gas at face of chamber.
	27	Charles Slobegeski, ..	Lithuanian,	Driver, ...	20	S.	Harry E, ...			Arm fractured. Fell between cars on gang way.
	28	John Laweranci, ...	Slavonian, .	Runner, ...	20	S.	Maltby, ...			Finger cut off between roof and topping on car on gangway.
Sept.	1	Toney Yanculla, ...	Polish, ...	Miner, ...	26	M	Maltby, ...			Head and arm cut by blast at face of chamber.
	2	Victor Sonskie, ...	Polish, ...	Laborer, ...	25	S.	Forty Fort, ...			Leg fractured by falling under car on gangway.
	5	Ignatzeo Gaetere, ...	Italian, ...	Miner, ...	39	M.	Harry E., ...			Back and leg bruised by fall of roof at face of chamber.
	11	George Bender, ...	Polish, ...	Laborer, ...	25	M	Mt. Lookout, ...			Arm broken by fall of rock at face of chamber.
	12	Carl Komonosky, ...	Lithuanian,	Laborer, ...	25	S.	William A., ...	Lackawanna,...		Compound fracture of leg by fall of roof at face of pillar.
	19	Anthony Protchke, ..	Polish, ...	Miner, ...	50	M	Maltby, ...			Leg broken by blast at face of chamber.
	21	William Urban, ...	Bohemian, .	Driver, ...	19	S.	Maltby, ...	Luzerne, ...		Hand crushed while attempting to hook mules to car while they were in motion.
	24	James Graham, ...	Scotch, ...	Mine foreman, ...	64	M	Louise, ...			Hands and face burned by gas in face of old place.
	26	Frank Merrenette, ..	Italian, ...	Miner, ...	26	S.	Mt. Lookout, ..			Back broken by fall of rock at face of cross-heading.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Sept. 29	Andrew Ondish, ...	Slavonian, ..	Headman	21	S.	Maltby, ...		Hand bruised while uncoupling cars on head of slope.
Oct. 1	Peter Nickanovitch,..	Russian, ...	Miner, ...	25	S.	Seneca, ...		Head and arms injured by blast at face of chamber.
13	John Rulolsh, ...	Slavonian, ..	Laborer, ...	57	M.	Louise, ...	Luzerne,....	Leg broken by blast at face of chamber.
20	Stanley Shaffer, ...	American,..	Driver, ...	18	S.	East Boston, ...		Hand crushed. Caught between topping on car and roof on gangway.
27	Frank Luksic, ...	Horwat, ...	Miner, ...	52	M.	Black Diamond,		Small bone in leg fractured by fall of coal at face of chamber.
	Elmer Tompkins, ...	American,..	Motorman, ...	41	M.	William A., ...	Lackawanna	Leg fractured and knee dislocated by cars on gangway.
30	Joseph Sarr, ...	Horwat, ...	Laborer, ...	22	S.	Black Diamond,		Collar bone broken. Fell while carrying prop on shoulder.
	William Smith, ...	Russian, ...	Laborer, ...	30	S.	Stevens, ...		Leg broken when car left track on chamber road.
Nov. 4	Frank Kostoskie, ...	Polish,.....	Miner, ...	29	M	Seneca, ...		Leg and head injured by blast at face of chamber.
	John Kostoskie, ...	Polish,.....	Laborer, ...	20	S.	Seneca, ...		Leg and head injured by blast at face of chamber.
14	Emlyn Jones, ...	Welsh,.....	Footman, ...	23	S.	Seneca, ...	Luzerne,....	Collar bone broken. Fell under cars on slope.
16	Michael Circle, ...	Slavonian, ..	Trackman, ...	52	M.	Harry E., ...		Fingers of both hands injured. Detonators exploded while he was handling them. Outside.
20	John Judge, ...	Irish, ...	Runner, ...	17	S.	East Boston, ...		Fingers crushed by cars at head of shaft. Outside.
24	Theodore Buckovich, ..	Polish,.....	Miner, ...	37	S.	Exeter, ...		Compound fracture of leg by blast at face of chamber.

CONDITION OF COLLIERIES

LEHIGH VALLEY COAL COMPANY

Exeter, Maltby, William A., Seneca, Westmoreland and Stevens.—Ventilation, drainage and condition as to safety, good.

KINGSTON COAL COMPANY

Kingston No. 4.—Ventilation, drainage and condition as to safety, good.

FORTY FORT COAL COMPANY

Harry E. and Forty Fort.—Ventilation, drainage and condition as to safety, good.

MT. LOOKOUT COAL COMPANY

Mt. Lookout.—Ventilation, drainage and condition as to safety, good.

EAST BOSTON COAL COMPANY

East Boston.—Ventilation, drainage and condition as to safety, good.

PLYMOUTH COAL COMPANY

Black Diamond.—Ventilation, drainage and condition as to safety, good.

RAUB COAL COMPANY

Louise.—Ventilation, drainage and condition as to safety, fair.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone.—Ventilation, drainage and condition as to safety, good.

RISSINGER BROTHERS AND COMPANY, INCORPORATED

Troy.—Ventilation, drainage and condition as to safety, good.

IMPROVEMENTS

KINGSTON COAL COMPANY

Kingston No. 4 Colliery.—Inside: No. 5 air shaft extended to the Bennett vein. Made air return course with two concrete and steel overcasts on east side of No. 1 Orchard slope. Constructed traveling way from No. 1 shaft to No. 3 shaft in the Bennett vein; also new traveling way in No. 4 shaft from the Eleven Foot and Checker veins, Rock plane district, to the Bennett vein landing in No. 1 shaft. Fireproof overcast constructed in Checker vein and four steel doors built between Nos. 1 and 4 shafts for emergency fire protection.

Outside: All boilers equipped with automatic feed water regulators and safety stop check valves. Equipment in wash house increased to meet the present requirements. Concrete powder house moved to another location away from the railroad tracks. Regular instruction given during the year in "First Aid and Rescue" work.

EAST BOSTON COAL COMPANY

East Boston Colliery.—Inside: Installed one 3-stage turbine and one 2-stage turbine pump in the Eleven Foot and Bennett veins, respectively. These pumps are electrically driven. Tunnel was driven from the Lance vein to the Cooper vein.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone Colliery.—Rock slope driven from the Bennett vein to the Red Ash vein. Extensive repairs are being made to the breaker. A washery is also under construction.

NINTH DISTRICT

LUZERNE COUNTY

Wilkes-Barre, Pa., February 19, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Ninth Anthracite District, for the year ending December 31, 1914.

Respectfully submitted,

D. T. DAVIS, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	18
Number of mines,	46
Number of mines in operation,	46
Number of tons of coal shipped to market,	4,610,289
Number of tons used at mines for steam and heat,	431,952
Number of tons sold to local trade and used by employes,	148,622
Number of tons produced,	5,190,863
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	8,404
Number of persons employed outside,	2,265
Number of fatal accidents inside of mines,	34
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines	38
Number of non-fatal accidents outside,	7
Number of tons of coal produced per fatal accident inside,	152,672
Number of tons produced per fatal accident outside,	2,585,432
Number of tons produced per fatal accident inside and outside,	144,190
Number of persons employed per fatal accident inside,	247
Number of persons employed per fatal accident outside,	1,133
Number of persons employed per fatal accident inside and outside,	297
Number of persons employed per non-fatal accident inside,	221
Number of persons employed per non-fatal accident outside,	323
Number of persons employed per non-fatal accident inside and outside,	237
Number of wives made widows,	19
Number of children made orphans,	54
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	17
Number of compressed air locomotives used inside,	7
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	40
Number of electric motors used outside,	3
Number of gasoline locomotives used inside,	.....
Number of fans in use,	42
Number of furnaces in use,	.....
Number of gaseous mines in operation,	37
Number of non-gaseous mines in operation,	9
Number of new mines opened,	2
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh and Wilkes-Barre Coal Company,	1,520,737
Delaware, Lackawanna and Western Railroad Company,	1,343,544
Delaware and Hudson Company,	1,137,051
Kingston Coal Company,	897,862
George F. Lee Coal Company,	123,293
West Nanticoke Coal Company,	77,131
Plymouth Coal Company,	70,447
Bright Coal Company,	17,738
Plymouth Red Ash Coal Company,	3,060
Total,	5,190,863

Production by Counties

Luzerne,	5,190,863

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh and Wilkes-Barre Coal Co.,	7	.....	7	17	4	21	217,248	89,455	2,198	605	2,803	314	.....	129	151
Delaware, Lackawanna and Western Railroad Co.,	10	.....	10	4	.....	4	134,354	335,886	2,263	419	2,682	226	.....	566	.....
Delaware and Hudson Co.,	6	1	7	14	2	16	189,509	84,218	1,779	547	2,326	296	547	127	274
Kingston Coal Co.,	7	1	8	1	.....	1	128,366	897,862	1,460	422	1,882	209	422	1,460	.....
George F. Lee Coal Co.,	1	.....	1	2	1	3	123,293	61,647	294	93	387	294	.....	147	93
West Nanticoke Coal Co.,	2	.....	2	.....	.....	.....	38,565	.....	120	26	146	60	.....	.....	.....
Plymouth Coal Co.,	1	.....	1	.....	.....	.....	70,447	.....	259	125	384	259	.....	.....	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	31	28	59	.....	.....	.....	.....
Totals and averages,	**34**	**2**	**36**	**38**	**7**	**45**	**152,672**	**136,602**	**8,404**	**2,265**	**10,669**	**247**	**1,133**	**221**	**323**

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	1	1	....	....	1	....	....	1	....	....	....	....	4	11.77
Falls of slate,	....	....	1	1	....	....	....	....	....	....	....	....	2	5.88
Falls of roof,	1	....	....	1	1	1	1	....	....	2	2	....	9	26.47
Mine cars,	2	....	....	....	....	1	....	....	....	....	....	1	4	11.76
Explosions of gas,	....	....	....	4	....	....	....	....	....	1	....	....	5	14.71
Suffocation by gas, etc.,	....	....	....	....	....	....	1	....	....	....	....	....	1	2.94
Explosions of powder and dynamite,	....	....	....	....	....	1	....	....	....	....	....	....	1	2.94
Blasts, premature and otherwise,	....	....	1	1	....	1	....	....	1	....	....	....	4	11.77
Falling into shafts,	....	1	....	....	....	....	....	....	....	....	....	....	1	2.94
Struck by timber,	....	....	1	....	....	....	1	....	....	....	....	1	3	8.82
Totals,	4	2	3	7	2	4	3	1	1	3	2	2	34	100.00
Outside														
Machinery,	2	....	....	....	....	....	....	....	....	....	....	....	2	100.00
Totals,	2	....	....	....	....	....	....	....	....	....	....	....	2	100.00
Grand totals inside and outside,	6	2	3	7	2	4	3	1	1	3	2	2	36	

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	2	....	....	....	1	....	....	....	....	2	1	6	15.79
Falls of roof,	....	....	....	....	....	2	....	....	1	....	1	1	5	13.16
Mine cars,	2	....	....	....	1	1	....	1	....	2	1	....	8	21.05
Explosions of gas,	....	....	4	....	2	....	....	....	....	1	....	....	7	18.42
Blasts, premature and otherwise,	....	....	....	1	....	....	....	2	....	....	....	2	5	13.16
Mules,	....	....	1	....	....	....	....	....	....	....	....	....	1	2.63
Struck by timber,	....	....	1	....	....	....	....	....	....	....	....	1	2	5.27
Struck by nail,	....	1	....	....	....	....	....	....	....	....	....	....	1	2.63
Struck by piece of rock,	....	2	....	....	....	....	....	....	....	....	....	....	2	5.26
Rush of culm,	1	....	....	....	....	....	....	....	....	....	....	....	1	2.63
Totals,	3	5	6	1	3	4	....	3	1	3	4	5	38	100.00
Outside														
Cars,	....	1	....	1	....	....	....	....	....	1	....	....	3	42.86
By falling,	....	....	1	....	....	....	....	....	....	....	1	....	2	28.57
Ash bank cave-in,	....	....	....	....	....	....	....	....	....	....	1	....	1	14.29
Struck by timber,	....	....	....	....	....	....	....	....	....	....	1	....	1	14.28
Totals,	....	1	1	1	....	....	....	....	....	1	3	....	7	100.00
Grand totals inside and outside,	3	6	7	2	3	4	....	3	1	4	7	5	45	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants,	....	....	....	....	....	....	1	....	....	....	....	....	1
Miners,	....	....	3	5	....	2	....	....	1	3	2	....	16
Miners' laborers,	1	1	....	2	2	....	2	1	....	....	....	1	10
Drivers and runners,	2	....	....	....	....	....	....	....	....	....	....	....	2
Company men,	1	....	....	....	....	2	....	....	....	....	....	1	4
Footmen,	....	1	....	....	....	....	....	....	....	....	....	....	1
Totals,	4	2	3	7	2	4	3	1	1	3	2	2	34
Outside													
Laborers,	1	....	....	....	....	....	....	....	....	....	....	....	1
Sweepers,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	2	....	....	....	....	....	....	....	....	....	....	....	2
Grand totals inside and outside,	6	2	3	7	2	4	3	1	1	3	2	2	36

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	1	1	1	....	3	....	1	....	1	2	3	13
Miners' laborers,	....	3	3	....	2	....	....	1	1	....	1	2	13
Drivers and runners,	1	....	2	....	....	....	....	....	....	1	....	....	4
Doorboys and helpers,	....	....	....	....	1	1	....	1	....	1	....	....	4
Company men,	2	1	....	....	....	....	....	....	....	....	1	....	4
Totals,	3	5	6	1	3	4	....	3	1	3	4	5	38
Outside													
Slatepickers (boys),	....	....	1	....	....	....	....	....	....	....	1	....	2
Laborers,	....	1	....	1	....	....	....	....	....	1	2	....	5
Totals,	....	1	1	1	....	....	....	....	....	1	3	....	7
Grand totals inside and outside,	3	6	7	2	3	4	....	3	1	4	7	5	45

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	2	....	....	....	....	1	....	....	....	....	....	1	4
Welsh,	1	....	....	1	....	....	1	....	....	....	....	....	3
Irish,	....	....	....	....	....	1	....	....	....	....	....	....	1
Polish,	1	2	1	6	2	....	....	....	1	1	1	1	16
Italian,	....	....	....	....	....	....	1	....	....	....	....	....	1
Slavonian,	....	....	2	....	....	....	....	1	....	....	....	....	3
Lithuanian,	1	....	....	....	....	1	....	....	....	1	....	....	3
Austrian,	....	....	....	....	....	....	....	....	....	....	1	....	1
Russian,	1	....	....	....	....	1	1	....	....	1	....	....	4
Totals,	6	2	3	7	2	4	3	1	1	3	2	2	36

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	2	....	1	....	....	....	....	1	....	....	1	....	5
English,	....	1	1	....	....	1	....	....	....	....	....	....	3
Welsh,	....	....	1	....	....	....	....	....	....	....	1	1	3
German,	....	....	1	....	....	1	....	....	....	....	....	....	2
Polish,	1	2	2	1	2	1	....	2	1	1	4	3	20
Italian,	....	1	....	....	....	....	....	....	....	....	....	....	1
Slavonian,	....	1	1	....	1	....	....	....	....	1	....	....	4
Lithuanian,	....	....	....	....	....	1	....	....	....	2	1	....	4
Russian,	....	1	....	....	....	....	....	....	....	....	....	1	2
Greek,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	3	6	7	2	3	4	....	3	1	4	7	5	45

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Lehigh and Wilkes-Barre Coal Co.																
Nottingham No. 15 Colliery:																
Nottingham,	Shaft,	Gaseous,	5 Fans,	24	7.10	6	69	2.0	Guibal, ...	Steam,						
				24	8	6	75	2.0								
				24	8	6	75	1.9								
				24	8	6	71	2.0								
Reynolds,	Slope,	Gaseous,	2 Fans,	24	8	6	75	1.9				21	450,489	305,247	523,360	740
				23.9	5.7	5.10	70	.9	Guibal, ...	Electricity						
				5	1.4	1	422	.....	Sturtevant,							
Lance No. 11 Colliery:																
Lance,	Shaft,	Gaseous,	3 Fans,	34.3	10.11	8.4	52	2.1	Guibal, ...	Steam,	..	14	284,770	195,690	344,980	477
				35	11	8.9	49	2.1								
				35	11.9	8.9	49	2.1								
Parrish No. 23 Colliery:																
Parrish,	Slope,	Gaseous,	2 Fans,	24	8	7.4	70	2.1	Guibal, ...	Steam,	..	7	39,960	36,291	44,775	178
				20	5.8	5.8	80	2.1								
Buttonwood No. 22 Colliery:																
Buttonwood,	Shaft,	Gaseous,	3 Fans,	35	11.9	10.6	50	2.1	Guibal, ...	Steam,	..	10	148,397	124,152	159,527	246
				24	8.4	8.6	78	2.1								
				20	5.7	5.9	**	**								
Inman No. 21 Colliery:																
Inman,	Shaft,	Gaseous,	Fan, ...	15	3	3	70	.6	Guibal, ...	Steam,	..	1	24,552	13,600	36,052	21

**Not in operation.

Delaware, Lackawanna and Western Railroad Co.																
Woodward Colliery:																
Woodward No. 1, ...	Shaft, ...	Gaseous, ..	2 Fans,	35	9.2	10.1	50	2.	Dickson, ..	Steam,.....						
				20	6	6	100	2.	Dickson, ..	Steam,.....						
Woodward No. 2, ...	Shaft, ...	Gaseous, ..	2 Fans,	20	7	6.6	78	2.2	Jeffrey, ...	Steam,.....		42	711,865	587,900	903,358	1379
				20	7	6.6	78	2.2	Jeffrey, ...	Steam,.....						
Woodward No. 3, ...	Shaft, ...	Gaseous, ..	2 Fans,	20	7	6.6	64	2.2	Jeffrey, ...	Steam,.....						
				20	7	6.6	64	1.6	Jeffrey, ...	Steam,.....						
Woodward No. 17, ...	Slope,.....	Gaseous, ..	Fan, ...	16	5	4	75	1.	D. L. and W.	Steam,.....	..	4	43,400	36,400	47,900	120
Loomis Colliery:																
Loomis, ...	Shaft, ..	Gaseous, ..	Fan, ...	20	7	6.2	65	2.3	Jeffrey, ...	Steam,....						
Loomis, ...	Shaft, ..															
Loomis, ...	Slope,.....	Gaseous, ..	Fan, ...	20	7	6.2	65	2.3	Jeffrey, ...	Steam,....	..	7	221,690	196,590	247,900	388
Avondale Colliery:																
				14	5.5	3.5	120	1.1	D. L. & W.,							
Avondale, ...	Shaft, ...	Gaseous, ..	3 Fans,	25	8	8	74	2.6	Vulcan, ...	Steam,....	..	10	196,300	170,000	222,300	381
				20	6	6	100	2.4	Guibal, ...							
Delaware and Hudson Co.																
Plymouth No. 3 Colliery:																
Plymouth, ...	Shaft, ...	Gaseous, ..	Fan, ...	28	10	7.6	60	2.2	Guibal, ..	Steam,.....	..	13	287,000	243,000	337,000	646
Plymouth, ...	Shaft, ...	Gaseous, ..	Fan, ...	17	5	4	45	.2								
Plymouth No. 5 Colliery:																
Plymouth No. 4, ...				17	5	4	100	.7								
Plymouth No. 5, ...	Shaft, ...	Gaseous, ..	Fan, ...	22	5	6.6	85	.3	Guibal, ...	Steam,.....	..	19	413,900	335,000	465,000	669
Boston, ...				22	5	6.6	75	.2								
Plymouth No. 2 Colliery:																
Plymouth, ...	Shaft, ...	Gaseous, ..	Fan, ...	28	10	7.6	71	3.4	Guibal, ...	Steam,.....	..	14	290,000	268,000	330,000	541
Plymouth, ...	Shaft, ...	Gaseous, ..	Fan, ...	22	5	6.6	80	2.1								
Kingston Coal Co.																
Kingston No. 2 Colliery:																
Kingston No. 2, ...	Shaft,.....	Gaseous, ..	2 Fans .	25	8.0	7.8	70	1.5	Guibal, ...	Steam,.....	..	6	114,840	102,875	122,770	413
				25	8.0	7.8	70	1.5								
Kingston No. 3, ...	Shaft, ...	Gaseous, ..	Fan, ...	21	6.0	6.9	78	1.3	Guibal, ...	Steam,.....	..	6	108,515	85,760	125,675	364
Kingston, ...	Slope,.....	Gaseous, ..	Fan, ...	25	8.	8.	60	.8	Guibal, ...	Steam,.....	..	7	107,640	95,260	110,840	316
Kingston, ...	Drift, ...	Gaseous, ..	Fan, ...													
Gaylord Colliery:																
Gaylord, ...	Slope, ...	Non-gas., .	Fan, ...	25	8.0	8.	60	1.1	Guibal, ...	Steam,.....	..	8	106,000	88,000	*88,000	....
George F. Lee Coal Co.																
Chauncey Colliery:																
Chauncey, ...	4 Slopes,..	Non-gas., .	Natural,	.....	.....	.....	.....	.....	.....	.....	..	4	62,000	52,500	69,000	294
Chauncey, ...	2 Drifts, ..	Non-gas., .	Natural,													
West Nanticoke Coal Co.																
West Nanticoke Colliery:																
Red Ash No. 1, ...	Slope,.....	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	..	22,000	20,000	23,430	50
Red Ash No. 1, ...	Tunnel, ..	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	..	10,458	10,000	10,630	10
West Nanticoke, ...	8 Drifts,..	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	..	62,800	60,000	63,860	60

*A portion of the current escapes through abandoned inaccessible workings.

TABLE I.—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Plymouth Coal Co.																
Dodson Colliery:																
Dodson, ...	Shaft, ...	Gaseous, ..	Fan, ...	20	6.6	5.8	90	2.3	Guibal, ...	Steam,.....	..	7	100,000	79,525	125,000	260
Bright Coal Co.																
Hillside Colliery:																
Hillside, ...	Slope,.....	Non-gas.,.	Fan., ...	10	4	2	85	2.	Guibal, ...	Steam,.....	..	1	38,000	18,000	47,000	15
Plymouth Red Ash Coal Co.																
Red Ash Colliery:																
Red Ash, ...	Slope,.....	Non-gas.,.	Natural, }	.....	.....	.....	.....	.....	.....	.....	..	1	21,000	20,000	25,000 {	11
Red Ash, ...	Drift, ...	Non-gas.,.	Natural, }													5

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh and Wilkes-Barre Coal Co.						
Nottingham No. 15, ...						
Lance No. 11, ...						
Parrish No. 23, ...	Luzerne, ...	C. F. Huber, Pres., ...	Wilkes-Barre, ...	E. J. Newbaker, ...	Wilkes-Barre, ...	C. R. R. of N. J.
Buttonwood No. 22, ...						
Inman No. 21, ...						
Washeries						
Parrish No. 23, ...	Luzerne, ...	C. F. Huber, Pres., ...	Wilkes-Barre, ...	E. J. Newbaker, ...	Wilkes-Barre, ...	C. R. R. of N. J.
Buttonwood No. 22, ...						
Delaware, Lackawanna and Western Railroad Co.						
Woodward, ...						
Loomis, ...	Luzerne, ...	C. E. Tobey, ...	Scranton, ...	H. G. Davis, ...	Kingston, ...	D. L. and W.
Avondale, ...						
Delaware and Hudson Co.						
Plymouth Nos. 2, 3, and 5,	Luzerne, ...	C. C. Rose, ...	Scranton, ...	E. R. Pettebone, ...	Dorranceton, ...	D. and H.
Washeries						
Plymouth Nos. 2, 3 and 5, ..	Luzerne, ...	C. C. Rose, ...	Scranton, ...	E. R. Pettebone, ...	Dorranceton, ...	D. and H.
Kingston Coal Co.						
Kingston No. 2, ...	Luzerne, ...	F. E. Zerby, ...	Kingston, ...	Thos. H. Williams,	Kingston, ...	D. L. and W., D. and H., and C. R. R. of N. J.
Gaylord, ...				Ralph A. Smith, ...	Plymouth, ...	D. L. and W., D. and H., Penna., and C. R. R. of N. J.
George F. Lee Coal Co.						
Chauncey, ...	Luzerne, ...	George F. Lee, ...	Wilkes-Barre, ...	George F. Lee, ...	Wilkes-Barre, ...	D. L. and W.
West Nanticoke Coal Co.						
West Nanticoke, ...	Luzerne, ...	A. D. W. Smith, ...	Wilkes-Barre, ...	Edwin W. Davies, ..	Dorranceton, ...	Pennsylvania
Plymouth Coal Co.						
Dodson, ...	Luzerne, ...	.....	.....	G. S. Jones, ...	Dorranceton, ...	D. L. and W.
Bright Coal Co.						
Hillside, ...	Luzerne, ...	David Spruks, ...	Plymouth, ...	Jonathan Vipond, ...	Scranton, ...	D. and H.
Plymouth Red Ash Coal Co.						
*Red Ash, ...	Luzerne, ...	W. L. Schlager, ...	Scranton, ...	George P. Lindsay, .	Plymouth, ...	D. L. and W.

*New mine.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Lehigh and Wilkes-Barre Coal Co.													
Nottingham No. 15,	Luzerne,	661,760	62,637	17,157	741,554	234	1,141	3	6	369,750	6,868	773	181
Lance No. 11,	Luzerne,	461,240	36,129	4,281	501,650	259	835	2	9	427,775	3,842	24,350	113
Parrish No. 23,	Luzerne,	63,672	12,121	1	75,794	115	700	1	3	42,375	40	21,810	74
Buttonwood No. 22,	Luzerne,	29,585	31,069	124	60,778	383		1	2	8,850	11,194	13,538	
Inman No. 21,		.....	.....	.....	.....	‡	21	.....	1	.....	.....	.....	.....
Totals,		1,216,257	141,956	21,563	1,379,776	.....	2,697	7	21	848,750	21,944	60,471	368
Washeries													
Parrish No. 23,	Luzerne,	42,028	41,192	5,171	88,391	290	73	.....	.....	.....	.....	.....	18
Buttonwood No. 22,	Luzerne,	49,005	1,380	2,185	52,570	206	33	.....	.....	.....	.....	.....	.....
		91,033	42,572	7,356	140,961	.....	106	.....	.....	.....	.....	.....	18
Totals,		1,307,290	184,528	28,919	1,520,737	.....	2,803	7	21	848,750	21,944	60,471	386
Delaware, Lackawanna and Western Railroad Co.													
Woodward,	Luzerne,	943,749	42,785	9,926	996,460	260	1,776	9	3	733,550	19,500	151,551	109
Loomis,	Luzerne,	†165,683	9,483	.....	175,165	270	437	1	1	121,550	12,543	40,400	14
Avondale,	Luzerne,	117,909	21,804	2,206	171,919	233	469	.....	.....	73,125	4,808	.....	43
Totals,		1,257,341	74,071	12,132	1,343,544	.....	2,682	10	4	928,225	36,851	191,951	166

†Coal prepared at Bliss Colliery in 10th District.
‡Sinking shaft.

Delaware and Hudson Co.													
Plymouth No. 3,	Luzerne,	427,944	102	6,563	434,609	247	896	3	4	318,900	13,340	1,526	98
Plymouth No. 5,		398,824	5,572	6,261	410,657	226	936	1	9	236,325	4,320	.....	115
Plymouth No. 2,		166,750	15,629	.....	182,379	153	494	3	3	148,550	7,194	.....	59
Totals,		993,518	21,303	12,824	1,027,645	.....	2,326	7	16	703,775	24,854	1,526	272
Washeries													
Plymouth No. 3,	Luzerne,	23,492	59,226	.....	82,718	60	*	.....	.....	.....	.....	.....	.....
Plymouth No. 5,		.....	25,324	.....	25,324	.....	¶	.....	.....	.....	.....	.....	.....
Plymouth No. 2,		864	500	.....	1,364	8	§	.....	.....	.....	.....	.....	.....
		24,356	85,050	.....	109,406	.....	.....	.....	.....	.....	.....	.....	.....
Totals,		1,017,874	106,353	12,824	1,137,051	.....	2,322	7	16	703,775	24,854	1,526	270
Kingston Coal Co.													
Kingston No. 2,	Luzerne,	599,566	20,000	70,933	690,499	269	1,416	7	1	491,425	6,300	4,150	141
Gaylord,		169,375	20,000	17,988	207,363	242	466	1	.....	92,500	10,825	.....	52
Totals,		768,941	40,000	88,921	897,862	.....	1,882	8	1	583,925	17,125	4,150	193
George F. Lee Coal Co.													
Chauncey,	Luzerne,	112,039	7,300	3,954	123,293	230	387	1	3	21,250	12,100	.....	50
West Nanticoke Coal Co.													
West Nanticoke,	Luzerne,	77,131	.....	.....	77,131	‡	146	2	.....	36,025	4,918	4,000	13
Plymouth Coal Co.													
Dodson,	Luzerne,	50,954	18,000	1,493	70,447	87	384	1	.....	16,525	2,500	2,500	35
Bright Coal Co.													
Hillside,	Luzerne,	15,719	1,700	319	17,738	289	36	.....	.....	12,000	500	.....	12
Plymouth Red Ash Coal Co.													
Red Ash,	Luzerne,	3,000	.....	60	3,060	†	23	.....	.....	1,250	.....	800	1
Grand totals,		4,610,289	431,952	148,622	5,190,863	.....	10,669	36	45	3,151,725	120,792	265,398	1,128

†Coal prepared in Chauncey breaker of George F. Lee Coal Company.
‡Coal prepared in No. 5 breaker of Susquehanna Coal Company.
*Included with Plymouth No. 3.
§Included with Plymouth No. 2.
¶Included with Plymouth No. 5.

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Lehigh and Wilkes-Barre Coal Co., ...	Luzerne, ...	.....	.....	59	10,525	10,525	3	7	5	207	16,349	12	11,199	5,660	1	11
Delaware, Lackawanna and Western Railroad Co., ...		.....	.....	24	5,400	5,400	5	.....	28	72	13,060	13	16,450	8,225	6	1
Delaware and Hudson Co., ...		21	567	30	8,100	8,667	.....	.....	.....	234	12,186	10	14,900	4,150	2	6
Kingston Coal Co., ...		.....	.....	13	3,450	3,450	7	.....	10	39	4,750	3	2,940	1,600	1	1
George F. Lee Coal Co., ...		.....	.....	5	310	310	2	.....	.....	5	440	.....	.....	.....	.....	.....
West Nanticoke Coal Co., ...		.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	7	.....
Plymouth Coal Co., ...		.....	.....	13	2,650	2,650	.....	.....	.....	19	2,650	5	3,500	3,500	1	4
Bright Coal Co., ...		3	235	.....	.....	235	.....	.....	.....	6	318	1	125	52	.....	.....
Plymouth Red Ash Coal Co., ...		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Totals, ...	.....	24	802	144	30,435	31,237	18	7	43	583	49,753	44	49,114	23,187	20	23

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh and Wilkes-Barre Coal Co.,	Luzerne,	5	4	47	676	549	216	96	26	558	21	2,198	....	4	26	124	112	36	12	291	605	2,803
Delaware, Lackawanna and Western Railroad Co.,		6	4	21	726	767	148	61	22	.....	508	2,263	....	4	36	65	55	...	7	252	419	2,682
Delaware and Hudson Co.,		4	5	16	500	625	241	56	17	268	47	1,779	....	5	23	120	73	111	3	212	547	2,326
Kingston Coal Co.,		5	17	5	550	480	170	14	1	117	101	1,460	2	3	39	37	2	31	5	303	422	1,882
George F. Lee Coal Co.,		1	1	....	76	108	37	....	2	69	....	294	....	1	4	4	21	...	1	62	93	387
West Nanticoke Coal Co.,		1	1	1	41	60	12	....	....	3	1	120	....	....	1	3	3	4	1	14	26	146
Plymouth Coal Co.,		1	1	3	55	82	30	16	8	43	20	259	1	1	5	25	25	7	2	59	125	384
Bright Coal Co.,		1	....	....	5	5	2	....	1	1	....	15	1	1	1	5	5	....	1	7	21	36
Plymouth Red Ash Coal Co.,		1	....	....	6	6	3	....	....	1	....	16	1	....	2	1	....	....	....	3	7	23
Totals,	.....	25	33	93	2,635	2,682	858	243	77	1,060	698	8,404	5	19	137	384	296	189	32	1,203	2,265	10,669

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Lehigh and Wilkes-Barre Coal Co.,	Luzerne,	16	12	14	17	15	16	8	8	11	11	17	17	162
Delaware, Lackawanna and Western Railroad Co.,		17	18	17	22	23	24	23	22	23	23	20	22	254
Delaware and Hudson Co.,		17	14	14	15	18	20	20	15	20	17	19	20	209
Kingston Coal Co.,		24	19	20	22	19	22	19	21	21	24	21	23	255
George F. Lee Coal Co.,		22	20	19	12	19	21	16	17	23	19	21	21	230
Plymouth Coal Co.,		16	15	16	14	15	11	.....	.....	.....	.....	.....	.....	87
Bright Coal Co.,		26	22	24	20	23	26	26	24	25	25	23	25	289

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 6	Michael Jugan, ...	Russian, ...	Sweeper, ...	18	S.	....	....	Kingston No. 2,		Fatally injured by machinery in breaker. Outside.
14	Samuel Davis, ...	American,..	Company man,	24	S.	....	....	Woodward, ...		Killed by fall of roof on slope.
15	Stephen Halliday, .. .	Lithuanian,	Driver, ...	18	S.	....	....	Woodward, ...		Killed by cars on gangway.
21	James Harvey, ...	American,..	Laborer, ...	17	S.	...	...	Plymouth No. 3,		Killed by being drawn into scraper line. Outside.
	Thomas Humphreys,..	Welsh,.....	Driver, ...	35	M.	1	1	Parrish No. 23, ..		Fatally injured by cars on gangway.
31	Frank Dryer, ...	Polish,.....	Laborer, ...	48	M.	1	5	West Nanticoke,		Fatally injured by fall of coal at face of chamber.
Feb. 6	Anthony Judolosky, ..	Polish,.....	Laborer, ...	30	S.	....	....	Kingston No. 2,		Killed by fall of coal at face of chamber.
20	John Sacola, ...	Polish,.....	Footman, ...	32	S.	....	....	Kingston No. 2,		Instantly killed by falling down shaft.
March 9	Anthony Joliski, ...	Polish,.....	Miner, ...	38	M.	1	2	Chauncey, ...		Killed by fall of slate at face of chamber.
11	George Stock, ...	Slavonian,..	Miner, ...	52	M.	1	5	Kingston No. 2,		Killed by timber falling on him in chamber.
17	Joseph Loschi, ...	Slavonian,..	Miner, ...	60	M.	1	....	Nottingham No. 15.		Killed by explosion of blast at face of chamber.
April 6	Thomas Owens, ...	Welsh,.....	Miner, ...	50	S.	....	...	Woodward.	Luzerne,....	Killed by explosion of blast at face of chamber.
10	Anthony Garbus, ...	Polish,.....	Miner, ...	46	M.	1	1	Woodward, ...		Killed by fall of slate at face of chamber.
21	Costic Mrozousky, ...	Polish,.....	Miner, ...	40	M.	1	3	Dodson, ...		Killed by fall of roof at face of chamber.
30	Julian Prorocki, ...	Polish,.....	Miner, ...	26	S.	....	..	Woodward, ...		Prorocki fired a blast and the flying coal from it broke a brattice, which allowed gas to accumulate, and the gas was ignited, fatally burning them at face of chamber.
	Joseph Nesgoda, ...	Polish,.....	Miner, ...	35	M	1	5			
	John Prorocki, ...	Polish,.....	Laborer, ...	27	S.	....	....			
	Joseph Racofski, ...	Polish,.....	Laborer, ...	26	S.	....	....			
May 4	Joseph Wisnieski, ...	Polish,.....	Laborer, ...	18	S.	....	....	Nottingham No. 15.		Killed by fall of roof at face of chamber.
14	Paul Reikiec, ...	Polish,.....	Laborer, ...	18	S.	....	....	Plymouth No. 3,		Killed by fall of coal at face of chamber.
June 6	Frank Zoranskie, ...	Lithuanian,	Miner, ...	44	M.	1	8	Lance No. 11, ..		Fatally injured by explosion of blast at face of chamber.
11	William Mortz, ...	Russian, ...	Miner, ...	26	M.	1	1	Plymouth No. 5,		Killed by explosion of powder in chamber.
23	Anthony Ritcoskie, ..	American,..	Company man,	25	S.	....	....	Lance No. 11, ..		Killed by cars on slope.
30	John Dougherty, ...	Irish, ...	Company man,	27	S.	....	....	Plymouth No. 2,		Killed by fall of roof on slope.
July 3	Richard Thomas, ...	Welsh,.....	Fire boss, ...	39	M.	1	4	Buttonwood No. 22.		Killed by fall of roof on gangway.
24	Vingense Corarette, ..	Italian, ...	Laborer, ...	42	M.	1	3	Kingston No. 2,		Killed by prop falling on him at face of chamber.

TABLE 4—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
July	30	Jacob Stick, ...	Russian, ...	Laborer, ...	20	S.	...	...	Nottingham No. 15.	Luzerne, ...	Suffocated by after-damp at face of chamber.
Aug.	2	Charles Hooven, ...	Slavonian, ..	Laborer, ...	27	M.	1	2	Kingston No. 2,		Killed by fall of coal at face of chamber.
Sept.	17	William Kalanatski, ..	Polish, ...	Miner, ...	31	M.	1	1	Plymouth No. 3,		Killed by explosion of blast at face of chamber.
Oct.	5	Anthony Miller, ...	Polish, ...	Miner, ...	42	M.	1	5	Plymouth No. 2,		Killed by fall of roof at face of chamber.
	15	John Ribenski, ...	Russian, ...	Miner, ...	43	M.	1	6	Plymouth No. 2,		Killed by fall of roof at face of chamber.
	20	George Stancavage, ..	Lithuanian,	Miner, ...	32	S.	....	...	Loomis, ...		Fatally burned by explosion of gas in chamber.
Nov.	6	John Belouick, ...	Austrian ...	Miner, ...	30	M.	1	1	Woodward, ...		Killed by fall of roof at face of chamber.
	10	Bronislaw Tubic, ...	Polish, ...	Miner, ...	24	S.	....	....	West Nanticoke,		Killed by fall of roof at face of chamber.
Dec.	10	Joseph Stumpyak, ...	Polish, ...	Laborer, ...	27	M.	1	1	Kingston No. 2,		Struck by prop 15 feet from face of pillar.
	22	John Keating, ...	American, ..	Company man,	23	M.	1	....	Gaylord, ...		Killed by cars on gangway.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 9	John Mates,	Polish,	Company man,	52	M.	Nottingham No. 15.		Arm fractured by cars on gangway.
17	Peter Hughes,	American,	Company man,	40	M.	Plymouth No. 3,		Arm fractured by rush of culm from slush line in chamber.
26	William Bryan,	American,	Driver,	17	S.	Plymouth No. 5,		Foot injured by cars on gangway.
Feb. 9	Michael Mickus,	Russian,	Laborer,	20	S.	Nottingham No. 15.		Leg bruised by being struck by piece of rock at face of chamber.
	Michael Nowinski,	Polish,	Laborer,	36	S.	Chauncey,		Leg bruised by being struck by piece of rock on slope.
	William Turnbull,	English,	Company man,	56	M.	Plymouth No. 2,		Eye bruised by flying nail on gangway.
11	John Coswoski,	Polish,	Laborer,	38	M.	Chauncey,		Skull fractured by fall of coal at face of chamber.
12	Uno Coteiney,	Italian,	Laborer,	23	M.	Parrish No. 23,		Foot injured by cars. Outside.
26	Joseph Gogolock,	Slavonian,	Miner,	25	M.	Plymouth No. 5,		Leg fractured by fall of coal at face of chamber.
March 7	Rockwell Bowdell,	American,	Slatepicker,	16	S.	Plymouth No. 2,		Leg fractured by falling in breaker. Outside.
9	Charles Youlls,	German,	Driver,	23	S.	Nottingham No. 15.	Luzerne,	Skull fractured by being kicked by mule on gangway.
10	Joseph Peters,	English,	Driver,	18	S.	Plymouth No. 5,		Seriously injured about abdomen by timber rolling on him on gangway.
12	John Mascavage,	Slavonian,	Laborer,	19	S.	Lance No. 11,		Head burned by explosion of gas at face of chamber.
13	David Williams,	Welsh,	Miner,	52	M.	Woodward,		Face and hands burned by explosion of gas in chamber.
	Louis Dimosky,	Polish,	Laborer,	23	S.			
	Edward Zimoskie,	Polish,	Laborer,	25	M.			
April 9	John Begensky,	Polish,	Miner,	57	M.	Lance No. 11,		Injured about body by explosion of blast at face of chamber.
10	Joseph Fisher,	Greek	Laborer,	21	S.	Lance No. 11,		Wrists fractured by cars under breaker. Outside.
May 8	Frank Kochan,	Polish,	Laborer,	28	M.	Buttonwood No. 22.		Face and hands burned by explosion of gas in chamber.
	John Szzelcy,	Polish,	Laborer,	29	M.			
12	Michael Dempsey,	Slavonian,	Doorman,	53	M.	Lance No. 11,		Arm fractured by cars on gangway.
June 2	Benjamin Klneczynski,	Polish,	Doorboy,	16	S.	Parrish No. 23,		Leg fractured by cars on gangway.
15	Richard Uytone,	English,	Miner,	42	M.	Plymouth No. 5,		Pelvis fractured by fall of roof at face of chamber.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
June 25	Martin Urban,	Lithuanian,	Miner,	46	M.	Lance No. 11,		Arm fractured by fall of coal at face of chamber.
30	Louis Heilberger,	German,	Miner,	50	M.	Plymouth No. 5,		Thigh fractured by fall of coal at face of chamber.
Aug. 13	Felix Sochacki,	Polish,	Doorboy,	16	S.	Plymouth No. 5,		Leg fractured by cars on gangway.
25	Ignatz Poroski,	Polish,	Laborer,	36	M.	Plymouth No. 3,		Body bruised by explosion of blast at face of chamber.
	George Hahn,	American,	Miner,	44	M.			
Sept. 19	Stephen Charkukie,	Polish,	Laborer,	56	S.	Plymouth No. 3,		Ankle fractured by fall of roof at face of chamber.
Oct. 5	Martin Stroner,	Polish,	Laborer,	16	S.	Chauncey,		Pelvic bone fractured by cars near breaker. Outside.
16	Stephen Nestinyok,	Slavonian,	Doorboy,	17	S.	Lance No. 11,		Hips squeezed by cars on gangway.
20	Stanley Yancoskie,	Lithuanian,	Miner,	28	S.	Loomis,		Body burned by explosion of gas in chamber.
23	John Bakeum,	Lithuanian,	Driver,	20	S.	Nottingham No. 15.		Clavicle fractured by cars on gangway.
Nov. 3	Anthony Yankowskie,	Lithuanian,	Miner,	56	M.	Nottingham No. 15.		Leg fractured by fall of coal at face of chamber.
6	John Howell,	Welsh,	Company man,	67	M.	Plymouth No. 2,		Leg fractured by cars on gangway.
16	Anthony Sholits,	Polish,	Miner,	42	M.	Plymouth No. 5,	Luzerne,	Leg fractured by fall of coal at face of chamber.
18	George Petchcofskie,	Polish,	Laborer,	40	M.	Lance No. 11,		Hip dislocated by fall of roof at face of chamber.
	Michael Serevin,	Polish,	Laborer,	46	M.	Lance No. 11,		Leg fractured by timber rolling on him. Outside.
21	Michael Mischeo,	Polish,	Laborer,	28	M.	Parrish No. 23,		Leg fractured when a portion of ash bank caved in. Outside.
23	Frank Bolinski,	American,	Slatepicker,	15	S.	Plymouth No. 5,		Arm fractured by falling in breaker. Outside.
Dec. 1	Stanizolof Sikony,	Polish,	Miner,	51	M.	Plymouth No. 5,		Ribs fractured by fall of coal at face of chamber.
2	Richard Edwards,	Welsh,	Miner,	43	M.	Inman No 21,		Leg fractured by fall of roof at face of chamber.
10	Stanley Deeman,	Polish,	Laborer,	22	S.	Nottingham No. 15.		Leg fractured by timber falling on him in chamber.
12	Stanley Balesta,	Polish,	Miner,	34	M.	Lance No. 11,		Leg fractured by explosion of blast at face of chamber.
28	William Commell,	Russian,	Laborer,	30	S.	Kingston No. 2,		Back bruised by explosion of blast at face of chamber.

CONDITION OF COLLIERIES

LEHIGH AND WILKES-BARRE COAL COMPANY

Nottingham No. 15, Lance No. 11, Parrish No. 23, Buttonwood No. 22 and Inman No. 21.—Safety conditions, ventilation and drainage, good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Woodward, Loomis and Avondale.—Safety conditions, ventilation and drainage, good.

DELAWARE AND HUDSON COMPANY

Plymouth Nos. 3, 5 and 2.—Safety conditions, ventilation and drainage, good.

KINGSTON COAL COMPANY

Kingston No. 2 and Gaylord.—Safety conditions, ventilation and drainage, good.

GEORGE F. LEE COAL COMPANY

Chauncey.—Safety conditions, ventilation and drainage, good.

WEST NANTICOKE COAL COMPANY

West Nanticoke.—Safety conditions, ventilation and drainage, good.

PLYMOUTH COAL COMPANY

Dodson.—Safety conditions, ventilation and drainage, good.

BRIGHT COAL COMPANY

Hillside.—Safety conditions, ventilation and drainage, good.

PLYMOUTH RED ASH COAL COMPANY

Red Ash.—Safety conditions, ventilation and drainage, good.

IMPROVEMENTS

LEHIGH AND WILKES-BARRE COAL COMPANY

Nottingham No. 15 Colliery.—Inside: Completed 21-inch bore hole, surface to Red Ash for 14 inch compressed air pipe. Outside: Reconstructed the breaker and supply store and placed a steel head frame at the shaft.

Lance No. 11 Colliery.—Inside: Completed No. 8 slope, Top Baltimore to Bottom Baltimore; No. 28 slope, Bottom to Top Red Ash; and No. 29 tunnel, Top Baltimore to Five Foot. Installed a 10 inch by 36 inch compound pump in Hillman vein.

Parrish No. 23 Colliery.—Inside: Completed No. 1 slope, Baltimore to Baltimore; and built a new barn. Installed electric haulage on 2nd West Baltimore and a centrifugal pump and gravity water pipe to No. 14 tunnel.

Buttonwood No. 22 Colliery.—Inside: Completed No. 10 tunnel, Kidney to Abbott; No. 11 tunnel, Stanton to Stanton; and No. 12 tunnel, Surface to No. 6 vein. Installed electric haulage on shaft level and 2nd East, No. 2 plane; also new pumping plant on shaft level.

Outside: Erected colliery shop, breaker engine-house hoisting house, timber yard and saw mill. Reconstructed the power plant and boiler plant. Installed electric haulage, Buttonwood to Inman No. 21, and breaker wash pump and reservoir.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Woodward Colliery.—Steam generators have been replaced by electric motor generators. Electric power is being generated at the Nanticoke power plant and transmitted by high tension lines, transformed and stepped down as necessity demands at the colliery.

Concrete walls and I beams have been placed around the shafts, thus reducing the fire risk considerably. Completed several rock tunnels for development and ventilation purposes.

Installed two 20-foot fans outside.

Loomis Colliery.—Completed a new shaft known as Loomis No. 3, near Butzbach's Landing, from surface to Hillman. Preparations are being made for the widening out of the Old Dundee shaft.

Avondale Colliery.—Completed reopening of the Red Ash vein; also second opening for No. 9 tunnel, Ross to Hillman, to be connected at the Five Foot vein. The Ross vein section, No. 5 slope, is still under water. Installed pumping equipment to remove the water from this colliery, the flooding of which was caused by the inflow of a large quantity of water from the Susquehanna River bed after the squeeze of November, 1910.

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—Inside: Completed two tunnels, one from Cooper to Bennett vein, and the other from Cooper to Lance vein, for haulage and second opening, also a tunnel in No. 3 shaft through roll in the Eleven Foot vein. Installed an electric hoist in No. 1 plane, Ross vein; and a new system of culm and surface clay and rock flushing. An emergency hospital was built near the main turnout of the Eleven Foot vein in the slope. The sides around the foot of No. 2 shaft were reinforced with concrete-steel.

Outside: Installed a new 6-inch bell mouth water line, 2,400 feet in length from fresh water tanks for fire emergency, and a new 8 inch by 6 inch by 10 inch Scranton Duplex pump. Fitted up brick

building for a wash house and installed bath equipments to meet the requirements of the number of men using it. Remodeled brick building for use as an outside hospital.

Completed a new playground in Edwardsville and opened it on May 30. As in former years, night school has been held during the winter in the Company's free library.

Gaylord Colliery.—Completed a 15 degree slope from Ross to Red Ash, for ventilation and second opening. Silting operations were carried on extensively during the year.

Outside: Completed hospital.

TENTH DISTRICT

LUZERNE COUNTY

Nanticoke, Pa., February 20, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: In compliance with the Act of Assembly of April 14, 1903, I hereby transmit my report as Inspector of Mines for the Tenth Anthracite District for the year ending December 31, 1914.

Respectfully submitted,

JOSEPH J. WALSH, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	10
Number of mines,	49
Number of mines in operation,	49
Number of tons of coal shipped to market,	4,798,768
Number of tons used at mines for steam and heat,	430,287
Number of tons sold to local trade and used by employes,	66,452
Number of tons produced,	5,295,507
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	8,227
Number of persons employed outside,	2,512
Number of fatal accidents inside of mines,	32
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	54
Number of non-fatal accidents outside,	6
Number of tons of coal produced per fatal accident inside,	165,485
Number of tons produced per fatal accident outside,	2,647,754
Number of tons produced per fatal accident inside and outside,	155,750
Number of persons employed per fatal accident inside,	257
Number of persons employed per fatal accident outside,	1,256
Number of persons employed per fatal accident inside and outside,	316
Number of persons employed per non-fatal accident inside,	152
Number of persons employed per non-fatal accident outside,	419
Number of persons employed per non-fatal accident inside and outside,	179
Number of wives made widows,	21
Number of children made orphans,	42
Number of steam locomotives used inside of mines,	2
Number of steam locomotives used outside,	32
Number of compressed air locomotives used inside,	12
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	75
Number of electric motors used outside,	7
Number of gasoline locomotives used inside,	3
Number of fans in use,	43
Number of furnaces in use,	.....
Number of gaseous mines in operation,	35
Number of non-gaseous mines in operation,	14
Number of new mines opened,	6
Number of old mines abandoned,	7

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware, Lackawanna and Western Railroad Company,	1,972,452
Susquehanna Coal Company,	1,710,965
West End Coal Company,	641,155
Lehigh and Wilkes-Barre Coal Company,	574,210
Alden Coal Company,	330,030
E. S. Stackhouse Coal Company,	66,695
Total,	5,295,507

Production by Counties

Luzerne,	5,295,507

TABLE B.—Fatal and non fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Delaware, Lackawanna and Western Railroad Co.,	15	.....	15	2	.....	2	131,497	986,226	3,140	574	3,714	209	.....	1,570	.....
Susquehanna Coal Co.,	9	1	10	28	3	31	190,107	61,106	2,695	1,264	3,959	299	1,264	96	421
West End Coal Co.,	2	.....	2	13	2	15	320,573	49,320	946	270	1,216	473	.....	73	135
Lehigh and Wilkes-Barre Coal Co.,	4	.....	4	7	1	8	143,553	82,030	705	184	889	176	.....	101	184
Alden Coal Co.,	2	.....	2	3	.....	3	165,015	110,010	599	181	780	300	.....	200	.....
E. S. Stackhouse Coal Co.,	.....	1	1	1	.....	1	.....	66,695	142	39	181	.....	39	142	.....
Totals and averages,	32	2	34	54	6	60	165,485	98,065	8,227	2,512	10,739	257	1,256	152	419

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	...	1	....	....	....	1	...	....	....	3	1	1	7	21.88
Falls of roof,	...	1	....	2	....	2	1	1	....	3	3	....	13	40.63
Mine cars,	1	....	1	....	....	....	....	....	....	1	1	....	4	12.50
Explosions of gas,	....	....	....	....	1	....	1	....	....	....	....	....	2	6.25
Blasts, premature and otherwise,	....	....	1	1	1	....	....	1	....	....	1	....	5	15.62
Falling into slopes, etc.,	....	1	....	....	....	....	....	....	....	....	....	....	1	3.12
Totals,	1	3	2	3	2	3	2	2	....	7	6	1	32	100.00
Outside														
Cars,	....	1	....	....	....	....	....	....	....	....	....	....	1	50.00
By falling,	....	....	....	....	....	....	....	....	....	....	1	....	1	50.00
Totals,	....	1	....	....	....	....	....	....	....	....	1	....	2	100.00
Grand totals inside and outside,	1	4	2	3	2	3	3	2	....	7	7	1	34	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	....	1	....	....	1	....	1	....	....	3	5.56
Falls of roof,	2	2	....	....	....	3	1	....	2	3	....	1	14	25.93
Mine cars,	3	1	1	1	2	....	1	1	3	....	1	1	17	31.48
Explosions of gas,	....	....	....	....	1	....	....	....	....	....	....	....	1	1.85
Explosions of powder and dynamite,	1	....	....	....	....	....	....	....	....	....	....	....	1	1.85
Blasts, premature and otherwise,	....	....	2	1	....	....	1	....	1	....	1	....	6	11.11
Falling into slopes, etc.,	....	....	....	....	....	....	1	1	....	....	....	....	2	3.70
Mules,	1	....	....	....	....	....	....	....	....	....	....	....	1	1.85
Struck by rope,	....	....	1	1	....	1	....	....	....	....	....	....	3	5.56
Struck by timber,	....	....	....	....	....	1	1	....	....	1	1	....	4	7.41
By falling,	....	....	....	....	....	....	....	....	....	1	1	....	2	3.70
Totals,	7	3	4	3	4	5	5	3	8	6	4	2	54	100.00
Outside														
Cars,	....	....	....	1	....	....	....	....	....	....	....	....	1	16.67
Machinery,	....	....	1	....	....	1	....	....	....	....	....	....	2	33.33
Struck by chain,	....	....	....	....	....	1	....	....	....	....	....	....	1	16.67
Struck by pipe,	....	....	....	....	....	....	....	1	....	....	....	....	1	16.67
Struck by rope,	....	....	....	....	....	....	....	....	1	....	....	....	1	16.66
Totals,	....	....	1	1	....	2	....	1	1	....	....	....	6	100.00
Grand totals inside and outside,	7	3	5	4	4	7	5	4	9	6	4	2	60	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	1	1	1	1	1	....	1	....	2	1	1	10
Miners' laborers,	....	2	....	2	1	2	....	1	....	4	3	....	15
Drivers and runners,	....	....	1	....	....	....	....	....	....	....	....	....	1
Doorboys and helpers,	....	....	....	....	....	....	....	....	....	....	1	....	1
Footmen,	1	....	....	....	....	....	....	....	....	....	....	....	1
Company men,	....	....	....	....	....	....	1	....	....	....	....	....	1
Motormen,	....	....	....	....	....	....	1	....	....	....	....	....	1
Engineers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Brakemen,	....	....	....	....	....	....	....	....	....	....	1	....	1
Totals,	1	3	2	3	2	3	2	2	....	7	6	1	32
Outside													
Blacksmiths and carpenters,	....	....	....	....	....	....	....	....	....	....	1	....	1
Dumpers,	....	1	....	....	....	....	....	....	....	....	....	....	1
Totals,	....	1	....	....	....	....	....	....	....	....	1	....	2
Grand totals inside and outside,	1	4	2	3	2	3	2	2	....	7	7	1	34

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2	2	4	1	1	4	4	1	4	1	3	1	28
Miners' laborers,	2	....	....	....	1	....	1	1	....	2	1	....	8
Drivers and runners,	2	1	....	1	....	....	....	....	3	....	....	1	8
Doorboys and helpers,	....	....	....	....	1	....	....	....	....	1	....	....	2
Company men,	....	....	....	....	....	1	....	....	....	....	....	....	1
Brakemen,	1	....	....	....	....	....	....	....	1	1	....	....	3
Footmen,	....	....	....	1	....	....	....	1	....	....	....	....	2
Motormen,	....	....	....	....	1	....	....	....	....	....	....	....	1
Shaftmen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	7	3	4	3	4	5	5	3	8	6	4	2	54
Outside													
Foremen,	....	....	....	....	....	1	....	....	....	....	....	....	1
Blacksmiths and carpenters,	....	....	....	....	....	1	....	....	....	....	....	....	1
Motor-tenders,	....	....	1	....	....	....	....	....	....	....	....	....	1
Oilers,	....	....	....	1	....	....	....	....	....	....	....	....	1
Laborers,	....	....	....	....	....	....	....	1	....	....	....	....	1
Platemen,	....	....	....	....	....	....	....	....	1	....	....	....	1
Totals,	....	....	1	1	....	2	....	1	1	....	....	....	6
Grand totals inside and outside,	7	3	5	4	4	7	5	4	9	6	4	2	60

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	....	1	....	....	....	1	....	....	....	1	....	4
English,	....	1	....	....	....	....	....	....	....	....	....	....	1
Welsh,	....	....	....	....	....	....	1	....	....	....	....	....	1
German,	....	....	....	....	....	....	....	....	....	....	1	....	1
Polish,	....	2	1	3	1	3	....	2	....	3	2	1	18
Hungarian,	....	....	....	....	....	....	....	....	....	....	1	....	1
Slavonian,	....	....	....	....	....	....	....	....	....	3	....	....	3
Lithuanian,	....	....	....	....	1	....	....	....	....	....	2	....	3
Austrian,	....	....	....	....	....	....	....	....	....	1	....	....	1
Russian,	....	1	....	....	....	....	....	....	....	....	....	....	1
Totals,	1	4	2	3	2	3	2	2	....	7	7	1	34

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	2	1	2	2	1	2	....	2	1	1	....	1	15
English,	....	....	....	1	....	....	....	....	....	....	....	....	1
German,	....	....	....	....	....	....	....	1	....	....	....	....	1
Polish,	3	2	3	1	1	3	2	....	5	3	3	....	26
Hungarian,	....	....	....	....	1	....	....	....	1	....	....	....	2
Italian,	2	....	....	....	....	1	....	1	....	....	....	....	4
Slavonian,	....	....	....	....	....	1	....	....	1	1	....	1	4
Lithuanian,	....	....	....	....	1	....	....	....	....	....	1	....	2
Austrian,	....	....	....	....	....	....	1	....	....	....	....	....	1
Russian,	....	....	....	....	....	....	2	....	1	1	....	....	4
Totals,	7	3	5	4	4	7	5	4	9	6	4	2	60

TABLE I.—Operators and mines, Kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Delaware, Lackawanna and Western Railroad Co.																
Auchincloss Colliery:																
Number 1,	Shaft,	Gaseous,	Fan,	25	8	8	70	2.6	Guibal,	Steam,	..	18	312,530	206,500	344,100	637
Number 2,	Shaft,	Gaseous,	Fan,	33	9.5	7	45	2.6								
Bliss Colliery:																
Bliss,	Shaft,	Gaseous,	3 Fans,	35	9.2	9.1	50	2	Guibal,	Steam,	..	30	280,000	262,500	315,800	815
Espy,	Tunnel,	Gaseous,		24	4.3	10	72	1.6	Guibal,							
				17	4	3.6	80	2.6	Vulcan,							
Truesdale Colliery:																
Number 1,	Shaft,	Gaseous,	Fan,	25	7	5	72	2.3	Guibal,	Steam,	..	16	273,000	235,000	293,000	421
Number 2,	Shaft,	Gaseous,	Fan,	25	7	5	75	2.7	Guibal,	Steam,	..	14	254,000	178,000	260,600	343
Number 1,	Slope,	Gaseous,	Fan,	16	7	5	91	2	Jeffrey,	Steam,	..	10	159,600	125,400	182,500	292
Number 5,	Slope,	Gaseous,														
Number 6,	Slope,	Gaseous,	Fan,	12	5	4	150	2.8	Jeffrey,	Steam,	..	11	170,000	145,000	191,000	251
Truesdale,	Tunnel,	Gaseous,	Fan,	12	3.25	3	124	1	Open Running.	Electricity,	..	5	49,200	39,200	61,900	186
Number 20,	Tunnel,	Gaseous,	Fan,	12	3.5	3.2	125	.6	Open Running.	Electricity,	..	9	66,800	66,100	71,500	196
Susquehanna Coal Co. Colliery No. 5:																
Number 2,	Shaft,	Gaseous,	3 Fans,	25	8	8	57	1.2	Guibal,	Steam,	..	8	142,624	88,490	150,000	360
				25	8	8	74	2.1								
				25	8	8	60	1.8								
Number 4,	Slope,	Gaseous,	4 Fans,	20	6	6	72	1.7	Guibal,	Steam,	..	7	170,380	140,100	196,700	280
				25	8	8	60	1.8								
				20	9.4	8	90	1.8								
				15	4	4	68	1								
Number 1,	Slope,	Gaseous,	Fan,	25	8	8	74	2.1	Guibal,	Steam,	..	1	25,300	21,500	26,000	64
Number 29,	Tunnel,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	21,160	15,000	21,300	16
Number 2,	Drift,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	3,000	2,050	3,100	5

Number 4,	Shaft,	Gaseous,	Fan,	20	6	6	70	1	Guibal,	Steam,	..	10	115,000	103,000	118,000	305
Number 5,	Shaft,	Gaseous,	Fan,	8	3.5	1.5	80	.1	Sturtevant,	Steam,	..	2	15,000	12,000	17,000	24
Number 1,*	Drift,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	14,000	9,060	14,300	9
Number 28,*	Tunnel,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	4,990	3,000	5,000	10
Colliery No. 6:																
Number 6,	Tunnel,	Gaseous,	Fan,	20	6	6	58	.7	Guibal,	Steam,	..	6	91,600	42,000	94,000	200
Number 6,	Shaft,	Gaseous,	3 Fans,	25	8	8	46	1.2	Guibal,	Steam,	..	9	238,000	95,000	243,000	250
				20	6	6	70	.9	Guibal,	Steam,						
				10	5	1.9	150	1.8	Jeffrey,	Electricity,						
Number 7,	Shaft,	Gaseous,	Fan,	10	5	1.9	120	1.2	Vulcan,	Steam,	..	7	89,000	85,000	90,000	324
Number 10,	Slope,															
Number 1,	Drift,	Gaseous,	Fan,	7.5	4	1.3	175	1.5	Capell,	Electricity,	..	2	49,000	48,000	50,000	98
Colliery No. 7:																
Number 1, South,	Shaft,	Gaseous,	2 Fans,	25	8	8	78	3.4	Guibal,	Steam,	..	5	140,000	125,000	152,000	265
				25	8	8	70	2	Guibal,	Steam,	..	3	60,000	50,000	68,000	140
				25	8	8	60	1.8	Guibal,	Steam,		1	25,000	14,000	28,000	10
				20	6	6	72	1.7	Guibal,	Steam,						
Number 1, North,	Shaft,	Gaseous,	5 Fans,	20	8	6	90	2.8	Guibal,	Steam,	..	5	100,000	90,000	118,000	240
				10	2.5	2.5	180	2.3	Capell,	Electricity,	..	3	70,000	60,000	76,000	155
				15	4	4	76	1.7	Guibal,	Steam,	..	1	10,000	7,000	11,000	25
West End Coal Co.																
West End Colliery:																
Long,	Drift,	Gaseous,	Fan,	16	4	6	100	1.5	Guibal,	Steam,	..	4	68,400	62,040	88,500	124
Sand,	Drift,	Gaseous,	Fan,	4	1.6	1	150	.5	Buffalo,	Electricity,	..	2	32,300	31,300	37,100	146
Barney,	Drift,	Non-gas.,	Fan,	16	4	6	60	.8	Guibal,	Steam,	..	2	48,000	38,000	49,500	125
Lee,	Shaft,	Gaseous,	Fan,	8	5	2.3	130	1.4	Jeffrey,	Electricity,	..	3	91,000	85,800	93,200	180
Number 1, Lee,	Drift,	Gaseous,	Fan,	15	4.5	4.5	90	.8	Guibal,	Electricity,	..	3	96,500	38,200	98,300	80
Number 3, Lee,	Drift,	Non-gas.,	Fan,	4	1.6	1	150	.5	Buffalo,	Electricity,	..	2	55,600	51,500	63,400	68
Lehigh and Wilkes-Barre Coal Co.																
Wanamie Colliery:																
Number 2,	Slope,	Gaseous,	Fan,	24	8	6	70	1.2	Guibal,	Steam,	..	11	120,000	114,000	126,000	308
Number 1,	Drift,															
Number 3,	Drift,	Gaseous,	Fan,	24	8	6	70	1.3	Guibal,	Steam,	..	9	126,575	105,800	132,700	236
Number 3,	Slope,															
Polander,	Drift,															
Number 28,	Tunnel,	Gaseous,	Fan,	8	2.8	2.5	60	.5	Guibal,	Steam,	..	1	9,700	8,150	9,900	12
Alden Coal Co.																
Alden Colliery:																
Number 1,	Shaft,	Gaseous,	Fan,	15	5	4.7	.....	.....	Guibal,	Steam,	..	4	46,700	40,000	47,800	83
Number 2,	Shaft,	Gaseous,	2 Fans,	24	8	7	.....	.....	Guibal,	Steam,	..	15	253,280	179,360	305,670	284
				24	9	5.9	.....	.....								
Baltimore,	Slope,	Non-gas.,	Fan,	15	5	4.7	.....	.....	Guibal,	Steam,	..	1	15,300	15,000	15,650	40
E. S. Stackhouse Coal Co.																
Salem Colliery:																
Beadle,	Drift,			.....	.....	.....	.....	.....	.....	.....	..	1	10,000	8,000	11,000	4
Red Ash,*	Drift,			.....	.....	.....	.....	.....	.....	.....	..	1	12,000	9,000	12,500	2
Number 4,	Drift,			.....	.....	.....	.....	.....	.....	.....	..	1	5,000	3,000	5,000	8
Number 2,	Drift,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	2	18,000	11,000	18,500	58
Number 1,*	Tunnel,			.....	.....	.....	.....	.....	.....	.....	..	3	8,000	7,000	8,100	23
Number 2,*	Tunnel,			.....	.....	.....	.....	.....	.....	.....	..	1	10,000	8,000	11,000	24
Crary,*	Drift,			.....	.....	.....	.....	.....	.....	.....	..	1	9,000	6,000	10,000	6

*New mine.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Delaware, Lackawanna and Western Railroad Co.						
Auchincloss,	Luzerne,	R. A. Phillips, General Manager. C. E. Tobey, Superintendent Coal Mining Dept.	Kingston,	H. G. Davis,	Kingston,	D., L. and W.
Bliss,						
Truesdale,						
Susquehanna Coal Co.						
Numbers 5, 6, 7,	Luzerne,	Robert A. Quin,	Wilkes-Barre,	Francis H. Kohlbraker.	Nanticoke,	Pennsylvania
Nanticoke Washery,						
West End Coal Co.						
West End,	Luzerne,	H. H. Brady,	Scranton,	H. A. Fillmore,	Shickshinny,	Pennsylvania and C. R. R. of N. J.
Lehigh and Wilkes-Barre Coal Co.						
Wanamie,	Luzerne,	C. F. Huber, General Manager.	Wilkes-Barre,	E. J. Newbaker,	Wilkes-Barre,	C. R. R. of N. J.
Alden Coal Co.						
Alden,	Luzerne,	K. M. Smith,	Alden Station,			C. R. R. of N. J.
E. S. Stackhouse Coal Co.						
Salem,	Luzerne,	E. S. Stackhouse,	Shickshinny,			D., L. and W.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Delaware, Lackawanna and Western Railroad Co.													
Auchincloss,	Luzerne,	275,494	19,767	3,898	304,159	261	743	4	1	76,400	10,650	113,500	33
Bliss,	Luzerne,	451,580	26,030	3,833	481,443	250	979	4	.....	392,125	17,533	11,150	61
Truesdale,	Luzerne,	1,151,985	34,750	115	1,186,850	270	1,992	7	1	976,125	111,264	192,950	38
Totals,		1,879,059	80,547	12,846	1,972,452	.....	3,714	15	2	1,444,650	139,447	317,600	132
Susquehanna Coal Co.													
Number 5,	Luzerne,	392,580	74,830	12,649	480,059	246	1,466	6	11	327,300	38,786	9,875	126
Number 6,	Luzerne,	553,073	51,617	5,672	610,362	247	1,205	3	11	376,400	50,605	6,825	72
Number 7,	Luzerne,	364,986	67,970	11,612	444,568	219	1,224	1	8	139,950	19,263	101,100	123
		1,310,639	194,417	29,933	1,534,989	.....	3,895	10	30	843,650	108,654	117,800	321
Nanticoke Washery,	Luzerne,	173,795	2,181	.....	175,976	273	64	.....	1	.....	.....	.....	.....
Totals,		1,484,434	196,598	29,933	1,710,965	.....	3,959	10	31	843,650	108,654	117,800	321
West End Coal Co.													
West End,	Luzerne,	555,257	75,920	9,978	641,155	281	1,216	2	15	84,275	82,150	168,651	35
Lehigh and Wilkes-Barre Coal Co.													
Wanamie,	Luzerne,	532,028	38,840	3,342	574,210	260	889	4	8	367,580	14,506	48,790	110

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Alden,													
Alden Coal Co.	Luzerne,	283,843	36,909	9,278	330,030	222	780	2	3	169,875	13,350	42,275	73
E. S. Stackhouse Coal Co.	Luzerne,	64,147	1,473	1,075	66,695	162	181	1	1	35,750	17,705	1,045	2
Salem,		4,798,768	430,287	66,452	5,295,507	.....	10,739	34	60	2,945,780	375,811	696,161	673
Grand totals,													

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Delaware, Lackawanna and Western Railroad Co.,	Luzerne,	.....	.....	13	5,318	5,318	.....	3	.....	53	57	10,990	10	7,780	6,380	8	3
Susquehanna Coal Co.,		6	210	53	13,952	14,162	.....	18	12	10	93	13,460	8	8,060	4,457	8	10
West End Coal Co.,		.....	.....	10	3,300	3,300	.....	8	.....	16	23	2,440	8	4,700	4,200	5	3
Lehigh and Wilkes-Barre Coal Co.,		.....	.....	10	1,666	1,666	.....	3	.....	.....	49	3,218	3	4,992	1,350	.....	.....
Alden Coal Co.,		.....	.....	11	2,262	2,262	3	2	.....	.....	9	1,375	2	1,800	1,000	1	5
E. S. Stackhouse Coal Co.,		.....	.....	1	150	150	.....	.....	.....	3	.....	.....	2	225	210	1	1
Totals,	.....	6	210	98	26,648	26,858	3	34	12	82	235	34,483	33	27,497	17,597	23	22

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Delaware, Lackawanna and Western Railroad Co., ..	Luzerne,	5	6	31	1,074	1,239	100	47	16	....	622	3,140	....	5	40	57	129	8	11	324	574	3,714
Susquehanna Coal Co., ...		4	10	37	845	879	244	55	19	64	538	2,695	1	5	99	181	164	38	17	759	1,264	3,959
West End Coal Co., ...		4	6	4	365	345	32	9	7	174	.....	946	1	2	28	26	30	17	5	161	270	1,216
Lehigh and Wilkes-Barre Coal Co., ...		1	2	14	315	200	56	29	5	83	.....	705	....	1	7	23	26	22	4	101	184	889
Alden Coal Co., ...		1	1	6	218	168	97	17	5	....	86	599	1	1	12	34	35	29	8	61	181	780
E. S. Stackhouse Coal Co.,		1	....	....	43	54	12	....	....	27	5	142	1	1	3	....	10	2	3	19	39	181
Totals, ...	.....	16	25	92	2,860	2,885	541	157	52	348	1,251	8,227	4	15	189	321	394	116	48	1,425	2,512	10,739

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Delaware, Lackawanna and Western Railroad Company..	Luzerne, ...	17	17	17	23	23	25	22	20	24	25	23	24	260
Susquehanna Coal Co., ...		19	16	19	22	22	18	14	20	22	23	22	19	236
West End Coal Co., ...		25	23	24	27	23	22	23	24	23	25	21	21	281
Lehigh and Wilkes-Barre Coal Co., ...		23	21	21	22	22	23	17	18	24	24	23	23	260
Alden Coal Co., ...		19	14	22	12	17	19	20	20	20	21	18	20	222
E. S. Stackhouse Coal Co., ...		13	11	12	11	11	12	13	12	11	16	17	23	162

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 16	Benjamin Griffith, ...	American,...	Footman, ...	22	S.	....	....	Number 5, ...	Luzerne, ...	Fatally injured by being run over by cars on slope lift.
Feb. 5	Frank Drosjel, ...	Polish, ...	Laborer, ...	29	M.	1	....	Truesdale, ...		Killed by falling down chamber manway, 170 feet, pitch 87 degrees.
10	Charles Dew, ...	English, ...	Miner, ...	59	M.	1	....	Bliss, ...		Killed by fall of top coal at face of chamber while removing pillars.
19	Peter Levondoski, ...	Polish, ...	Laborer, ...	41	M.	1	7	Truesdale, ...		Killed by fall of rock at face of chamber.
20	John Spertz, ...	Russian, ...	Dumper, ...	20	S.	....	....	Number 6, ...		Fatally squeezed between car and dumping block at top of breaker. Outside.
March 12	John Bragle, ...	American,...	Driver, ...	19	S.	....	....	Wanamie, ...		Fatally injured. He fell along moving car on gangway road and car wheel crushed his arm.
30	Frank Prundick, ...	Polish, ...	Miner, ...	45	M.	1	4	Auchincloss, ...		Killed by premature blast at face.
April 7	Albert Tattara, ...	Polish, ...	Miner, ...	60	M	1	6	Bliss, ...		Killed by fall of roof while removing pillars.
	Vincent Tattara, ...	Polish, ...	Laborer, ...	19	S.	....	....			
30	Edward Yashinski, ...	Polish, ...	Laborer, ...	27	S.	....	....	Number 5, ...		Killed by premature blast. The miner, who was charging a hole in the coal with black powder, was also seriously burned.
May 6	Anthony Zulinski, ...	Lithuanian,	Laborer, ...	30	M.	1	1	Auchincloss, ...		Fatally burned by gas in chamber.
12	John Kochinski, ...	Polish, ...	Miner, ...	59	M.	1	1	Bliss, ...		Fatally injured by premature blast at face.
June 16	Mike Olshefski, ...	Polish, ...	Miner, ...	56	M.	1	2	Alden, ...		Killed by fall of coal about 30 feet back from face.
25	Vernce Kushmis, ...	Polish, ...	Laborer, ...	35	M.	1	....	Wanamie, ...		Killed by fall of rock at face of chamber.
27	Peter Kulick, ...	Polish, ...	Laborer, ...	32	M.	1	1	Truesdale, ...		Killed by fall of rock on gangway road.
July 14	Evan James, ...	Welsh, ...	Motorman, ...	23	M.	1	2	Truesdale, ...		Fatally injured by fall of rock on gangway road.
29	Frank Kivler, ...	American,...	Company man,.	53	M.	1	....	Number 5, ...		Fatally burned by gas while erecting brattice in cross-heading.
Aug. 4	Dominic Skinger, ...	Polish, ...	Miner, ...	49	M.	1	1	Number 5, ...		Killed by premature blast. He was found dead about 17 feet back from face.
14	Julius Lakecwic, ...	Polish, ...	Laborer, ...	27	M.	1	2	Auchincloss, ...		Killed by fall of rock at face of slope.
Oct. 8	Michael Michalek, ...	Slavonian, .	Engineer, ...	22	S.	....	....	Number 5, ...		Fatally injured by fall of roof on gangway road.
	Frank Grabinski, ...	Polish, ...	Miner, ...	55	M.	1	....	Number 6, ...		Killed by fall of coal at face of chamber.
10	Wadick Gambusha, ...	Polish, ...	Laborer, ...	23	S.	....	....	Wanamie, ...		Killed by fall of coal at face of chamber.

Oct.	13	Frank Dobkowski, ...	Polish, ...	Laborer, ...	23	S.	....	....	Number 6, ...		Fatally injured by fall of rock at face of chamber.
	19	John Zelek, ...	Austrian, ...	Laborer, ...	38	M.	1	4	Number 7, ...		Killed by fall of rock at face of chamber.
	22	Peter Warthol, ...	Slavonian, .	Miner, ...	25	M.	1	....	Truesdale, ...		Killed by fall of coal at face of chamber.
	23	Charles Rotick, ...	Slavonian, .	Laborer, ...	19	S.	....	....	West End, ...		Killed by car. His clothing was caught in moving car and he was pulled between car and rib.
Nov.	2	Stephen Tokar, ...	Hungarian,	Doorboy, ...	18	S.	....	....	Alden, ...		Fatally injured by being squeezed between derailed car and rib.
	14	William D. Henpcke,..	American,...	Carpenter, ...	60	M.	1	....	Salem, ...		Fatally injured while removing part of a slush chute. The section he was removing gave way and he was thrown to the ground from a height of 12 feet. Outside.
	16	William Nicitis, ...	Lithuanian,	Miner, ...	50	M.	1	4	Auchincloss, ...	Luzerne, ...	Killed by fall of coal at face of chamber.
	17	George Stanley, ...	German, ...	Laborer, ...	37	S.	....	....	Truesdale, ...		Killed by fall of rock at face of chamber.
		John Leceskie, ...	Polish, ...	Laborer, ...	49	M.	1	3	West End, ...		Killed by fall of rock at bottom of chamber while cleaning a fall of roof.
	28	Louis Gorka, ...	Polish, ...	Brakeman, ...	19	S.	....	....	Number 5, ...		Fatally injured by fall of roof in No. 8 tunnel.
		John Pitchunas, ...	Lithuanian,	Laborer, ...	26	S.	....	....	Wanamie, ...		Fatally injured by premature blast. The miner was also seriously injured.
Dec.	21	Ben Weguvzwelwiez,.	Polish, ...	Miner, ...	39	M.	1	4	Truesdale, ...		Fatally injured by fall of coal while skipping pillar in chamber.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	Albert Smith, ...	American,...	Brakeman, ...	18	S.	West End, ...		Leg broken by cars on gangway road.
10	Joseph Peteneary, ...	Italian, ...	Laborer, ...	19	S.	Wanamie, ...		Leg broken. Struck by cars on slope.
13	Anthony Mascofski, ..	Polish, ...	Miner, ...	34	M.	Number 7, ...		Hands shattered. Stick of dynamite exploded while he was cutting it with car ticket.
17	Barney Washoloski, ..	Polish, ...	Miner	39	M.	Number 5, ...		Back broken by fall of rock while making a hitch to stand prop at face.
23	Stanley Kovalski, ...	Polish, ...	Driver, ...	19	S.	Number 7, ...		Arm fractured. Kicked by mule.
26	Sam Veti, ...	Italian, ...	Laborer, ...	18	S.	West End, ...		Leg broken by fall of rock while helping miner to stand prop.
29	John Kazmierski, ...	American,...	Driver, ...	17	S.	Number 6, ...		Leg broken. Caught between car and plank on gangway road.
Feb. 10	Joseph Duzinski, ...	Polish, ...	Miner, ...	53	M.	Number 5, ...		Collar bone broken and knee injured by fall of rock at face of chamber.
19	Roman Gavinski, ...	Polish, ...	Miner, ...	28	M.	West End, ...		Leg broken by fall of rock at working face.
24	Joseph Slocpko, ...	American,...	Driver, ...	18	S.	Wanamie, ...		Body bruised by being caught by cars. He fell along track.
March 9	Joe Yurkes, ...	Polish, ...	Miner, ...	47	M.	West End, ...	Luzerne, ...	Ankle broken. Struck by rope.
11	Joseph Bolden, ...	Polish, ...	Miner, ...	41	M.	Number 6, ...		Hand cut off and eye injured by blast.
17	Joe Skibinski, ...	Polish, ...	Miner, ...	35	M.	West End, ...		Eyes and head injured by premature blast.
19	Leon Schneikart, ...	American,...	Motor-tender, ...	16	S.	Nanticoke Washery, ..		Compound fracture of leg. Caught in scraper line. Outside.
21	John F. Andrews, ...	American,...	Miner, ...	42	M.	West End, ...		Leg broken by derailed car on gangway road.
April 24	Walter Henchcliffe, ...	American,...	Runner, ...	21	S.	West End, ...		Fingers crushed by rope at sheave on endless rope haul.
27	Andrew Harrachik, ...	American,...	Oiler, ...	15	S.	Number 6, ...		Leg fractured. Fell between moving cars while uncoupling them. Outside.
30	William Smith, ...	English, ...	Miner, ...	31	M.	Number 5, ...		Face, breast, arms and hands burned by premature blast.
	John Reyback, ...	Polish, ...	Footman, ...	23	S.	Number 7, ...		Hand run over by car while blocking car wheel.
May 4	Stanley Piontkowski, .	American,...	Doorboy, ...	16	S.	Number 7, ...		Compound fracture of ankle by car on airway road.
6	Walter Lowery, ...	Lithuanian,	Miner, ...	31	M.	Auchincloss, ...		Head, arms and body burned by gas in cross-cut.

May	6	Mike Sandor,	Hungarian,	Laborer,	28	M.	West End,			Leg broken by fall of coal at face.
	16	Anthony Weiss,	Polish,	Motorman,	23	M.	Number 6,			Leg broken. Caught between door and motor.
June	3	Frank Moskal,	Polish,	Miner,	39	S.	Number 5,			Head cut and thigh fractured by fall of rock at face.
	8	William Miller,	American,	Carpenter,	40	S.	Wanamie,			Arm broken by being struck by a drive chain that broke. Outside.
	9	Valentine Frank,	Italian,	Miner,	47	M.	Wanamie,			Arm broken by fall of rock at face.
	17	George MacAllister,	American,	Breaker boss,	30	M.	Number 6,			Arm broken by machinery. Outside.
	26	Stanley Rugotski,	Polish,	Company man,	50	M.	West End,			Arm broken. Struck by flying rope that broke on plane.
		Peter Butchek,	Polish,	Miner,	37	M.	West End,			Leg broken by being caught between plank and rib. Plank was shoved by car at face.
	30	John Mikitka,	Slavonian,	Miner,	27	M.	Truesdale,			Skull fractured and otherwise injured by fall of rock at face of chamber.
July	3	Anthony Pryor,	Polish,	Miner,	28	M.	Number 7,			Simple fracture of leg. Prop fell on him at face.
	7	Thomas Urchak,	Russian,	Miner,	54	M.	Alden,			Leg fractured and injured internally by fall of rock at face.
	9	John Clestek,	Russian,	Laborer,	29	M.	Number 6,			Leg fractured. Fell while coming down chamber.
	17	Stanley Smugulski,	Polish,	Miner,	33	M.	West End,			Arm broken and face, hands and body cut and burned by premature blast.
	21	Michael Kishel,	Austrian,	Miner,	43	M.	Number 7,			Leg fractured. Squeezed between car and piece of coal at face.
Aug.	13	John Borofski,	German,	Miner,	40	M.	Number 7,			Rib and ankle fractured and head cut by fall of coal at face.
	17	William Kester,	American,	Laborer,	25	M.	West End,	Luzerne,		Arm broken. Pipe at water tank fell on him. Outside.
	24	Clemo Trahair,	American,	Footman,	30	M.	Alden,			Leg broken by runaway car on slope.
	28	John Persta,	Italian,	Laborer,	30	S.	Wanamie,			Leg broken. Fell while walking down chamber.
Sept.	2	Andrew Ontkoski,	Polish,	Plateman,	32	S.	West End,			Finger crushed. Caught between rope and sheave wheel. Outside.
	5	Wadic Gorney,	Polish,	Brakeman,	18	S.	Number 6,			Leg bruised. Squeezed between cars on chamber road.
	9	Joseph Malefski,	Polish,	Miner,	35	M.	West End,			Two fingers cut off by fall of rock while coming down his chamber.
		Edward Zuranski,	Polish,	Driver,	19	S.	Number 5,			Thigh fractured. Caught between car and rail on haulage road.
	10	John Stemkovitz,	Slavonian,	Miner,	30	M.	Number 5,			Ribs fractured. Squeezed between car and concrete frame.
	12	Robert Burns,	American,	Runner,	19	S.	Number 6,			Small bone in leg broken. Squeezed between cars on gangway.
	14	John Waslowski,	Polish,	Driver,	18	S.	Number 5,			Collar bone fractured. Squeezed between mule and car.
	19	William Yurgelevicz,	Russian,	Miner,	45	M.	Number 5,			Collar bone fractured by premature blast.
	25	John Kolas,	Hungarian,	Miner,	47	M.	Salem,			Two ribs fractured and back bruised by fall of roof at face of chamber.
Oct.	3	Mike Fedock,	Russian,	Shaftman,	31	M.	Number 6,			Two ribs and leg fractured by being struck by timber that fell off car.
	8	Anthony Ravonski,	Polish,	Laborer,	61	M.	Wanamie,			Leg broken by fall of rock at face of chamber.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 8	Charles Michalek, ...	Slavonian, .	Doorboy, ...	16	S.	Number 5, ...		Knee fractured by fall of roof on haulage road.
	Arthur David, ...	American,...	Brakeman, ...	18	S.	Number 5, ...		Hand and finger crushed by fall of roof on haulage road.
14	Frank Wupinski, ...	Polish, ...	Laborer, ...	22	S.	West End, ...		Leg broken. Fell off platform that he had erected on car at face.
31	Mike Miemicz, ...	Polish, ...	Miner, ...	38	M.	Number 6, ...		Leg fractured by fall of coal at face of chamber.
Nov. 11	John Terkowski, ...	Polish, ...	Miner, ...	58	M.	Number 6, ...	Luzerne, ...	Three ribs broken and lung punctured. Fell while running away from a falling prop at face.
23	Felix Mykanovage, ...	Polish, ...	Laborer, ...	24	S.	Number 5, ...		Collar bone fractured. Squeezed between car and rib in chamber.
28	Joseph Kavetzki, ...	Polish, ...	Miner, ...	36	M.	Number 7, ...		Collar bone fractured. Timber fell on him at face.
	William Savitski, ...	Lithuanian,	Miner, ...	26	M.	Wanamie, ...		Head and body cut by coal from premature blast.
Dec. 7	Edward Leggett, ...	American,...	Driver, ...	19	S.	Wanamie, ...		Arm fractured. Run over by car on gangway road.
12	Simon Relka, ...	Slavonian, .	Miner, ...	44	M.	Alden, ...		Leg and ribs fractured by fall of rock at face.

CONDITION OF COLLIERIES

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Auchincloss.—Ventilation, drainage and condition as to safety, good. Roads, fair.

Bliss.—Ventilation, drainage and roads, fair. Condition as to safety, good.

Truesdale.—Ventilation and condition as to safety, good. Roads and drainage, fair.

SUSQUEHANNA COAL COMPANY

Numbers 5 and 6.—Ventilation, roads and drainage, fair. Condition as to safety, good.

Number 7.—Ventilation, fair. Roads, drainage and condition as to safety, good.

WEST END COAL COMPANY

West End.—Ventilation, roads and drainage, fair. Condition as to safety, good.

LEHIGH AND WILKES-BARRE COAL COMPANY

Wanamie.—Ventilation and drainage, fair. Roads and condition as to safety, good.

ALDEN COAL COMPANY

Alden.—Ventilation and roads, fair. Drainage and condition as to safety, good.

E. S. STACKHOUSE COAL COMPANY

Salem.—Ventilation, roads and drainage, fair. Condition as to safety, good.

IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Auchincloss Colliery.—Shaft timber in No. 1 shaft is being replaced with concrete and steel.

The work of driving several rock tunnels from one seam to another for development, ventilation, etc., was completed during the year.

Bliss Colliery.—The ventilation fan referred to in my last report has been installed and is now in operation. A rock tunnel has been driven from Baltimore to Forge vein. Concrete walls and I beams are being placed at the Ross vein shaft level.

Truesdale Colliery No. 20 Tunnel section.—A slope is being sunk from the surface to the Red-ash vein at this point. A 250 H. P. electrically operated hoist has also been installed. A rock tunnel No. 1 East lift, No. 10 slope, is being driven to the Ross vein. No. 6 slope is being extended from the Hillman vein across the measures for a distance of 900 feet more or less. A rock tunnel has been driven from the Mills to the George vein for development.

A rock manway is being driven parallel with No. 7 tunnel Red-Ash vein. Numerous other rock tunnels have been driven or are now

under way for the development of this property. This colliery is the only one in operation in the Anthracite Coal Fields that has shipped to market over one million tons of coal in two successive years.

SUSQUEHANNA COAL COMPANY

Colliery No. 5.—Placed in No. 8 tunnel 50 sets of steel timber. Placed in No. 6 lift, No. 4 slope, 25 sets of steel timber.

Colliery No. 6.—Installed a shortwall electric mining machine At the head of No. 7 shaft a new steel head frame was built to replace the wooden structure. A wash-house was built during the year and a new fire alarm system was installed in the breaker.

Colliery No. 7.—A rock airway, for the purpose of ventilation, from the lower workings of the south shaft to the surface, was driven 259 yards during the year.

LEHIGH AND WILKES-BARRE COAL COMPANY

Wanamie Colliery.—Tunnel for ventilation driven from Top to Bottom Baltimore, No. 24 tunnel east. No. 37 tunnel driven from Top Baltimore to Hillman. Tunnel driven from Hillman to Hillman, No. 12 tunnel west. No. 13 slope extended Top Baltimore to Baltimore.

ELEVENTH DISTRICT

LUZERNE COUNTY

Hazleton, Pa., February 20, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Eleventh Anthracite District, for the year ending December 31, 1914.

Respectfully submitted,

DAVID J. RODERICK, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	21
Number of mines,	80
Number of mines in operation,	78
Number of tons of coal shipped to market,	5,366,890
Number of tons used at mines for steam and heat,	700,289
Number of tons sold to local trade and used by employes,	172,923
Number of tons produced,	6,240,102
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	7,787
Number of persons employed outside,	3,816
Number of fatal accidents inside of mines,	21
Number of fatal accidents outside,	10
Number of non-fatal accidents inside of mines,	49
Number of non-fatal accidents outside,	4
Number of tons of coal produced per fatal accident inside,	297,148
Number of tons produced per fatal accident outside,	624,010
Number of tons produced per fatal accident inside and outside,	201,294
Number of persons employed per fatal accident inside,	371
Number of persons employed per fatal accident outside,	382
Number of persons employed per fatal accident inside and outside,	374
Number of persons employed per non-fatal accident inside,	159
Number of persons employed per non-fatal accident outside,	954
Number of persons employed per non-fatal accident inside and outside,	219
Number of wives made widows,	15
Number of children made orphans,	50
Number of steam locomotives used inside of mines,	16
Number of steam locomotives used outside,	78
Number of compressed air locomotives used inside,	12
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	29
Number of electric motors used outside,	.....
Number of gasoline locomotives used inside,	.....
Number of fans in use,	51
Number of furnaces in use,	.....
Number of gaseous mines in operation,	31
Number of non-gaseous mines in operation,	49
Number of new mines opened,	2
Number of old mines abandoned,	2

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
G. B. Markle Company,	1,704 909
Lehigh Valley Coal Company,	1,007,071
Coxe Brothers and Company, Incorporated,	944,753
Pardee Brothers and Company, Incorporated,	659,754
A. Pardee and Company,	598,965
C. M. Dodson and Company,	447,105
Harwood Coal Company,	209,417
Upper Lehigh Coal Company,	171,304
J. S. Wentz and Company,	156,125
M. S. Kemmerer and Company,	125,758
Harleigh Brookwood Coal Company,	117,471
Hazle Mountain Coal Company,	88,420
Wolf Coal Company,	4,891
Thomas R. Reese and Son,	4,159
Total,	6,240,102

Production by Counties

Luzerne,	6,196,322
Carbon,	43,780
Total,	6,240,102

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
G. B. Markle Co.,	4	3	7	10	2	12	426,227	170,491	1,787	752	2,539	447	251	179	376
Lehigh Valley Coal Co.,	10	2	12	11	.....	11	100,707	91,552	1,584	697	2,281	158	349	144	.....
Coxe Brothers and Co., Inc.,	2	2	4	2	.....	2	472,377	236,188	1,037	484	1,521	519	242	519	.....
Pardee Brothers and Co., Inc.,	.....	.....	.....	6	.....	6	.....	109,959	735	377	1,112	.....	.....	123	.....
A. Pardee and Co.,	1	1	2	8	.....	8	598,965	74,871	1,083	487	1,569	1,082	487	135	.....
C. M. Dodson and Co.,	2	.....	2	7	1	8	223,553	63,872	492	257	749	246	.....	70	257
Harwood Coal Co.,	1	.....	1	.....	.....	.....	209,117	.....	317	135	452	317	.....	.....	.....
J. S. Wentz and Co.,	.....	2	2	1	1	2	.....	156,125	128	136	264	.....	68	128	136
M. S. Kemmerer and Co.,	.....	.....	.....	2	.....	2	.....	62,879	179	102	281	.....	.....	90	.....
Harleigh Brookwood Coal Co.,	1	.....	1	1	.....	1	117,471	117,471	175	70	245	175	.....	175	.....
Hazle Mountain Coal Co.,	.....	.....	.....	1	.....	1	.....	88,420	132	105	237	.....	.....	132	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	139	214	353	.....	.....	.....	.....
Totals and averages,	21	10	31	49	4	53	297,148	127,349	7,787	3,816	11,603	371	382	159	954

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	....	....	....	1	1	2	....	1	....	5	23.81
Falls of slate,	....	....	....	1	2	....	1	....	1	1	2	....	8	33.10
Mine cars,	....	....	1	....	....	....	....	....	1	4	....	....	6	28.57
Falling into slopes, etc.,	....	....	....	....	....	....	....	....	....	....	....	1	1	4.76
Caught between falling prop and chute,	....	....	....	....	....	....	....	....	....	....	....	1	1	4.76
Totals,	....	....	1	1	2	....	2	1	4	5	3	2	21	100.00
Outside														
Cars,	....	1	1	1	....	....	....	....	3	....	....	....	6	60.00
Machinery,	....	1	1	....	....	....	....	1	....	....	....	....	3	30.00
Scalded by steam,	....	....	....	....	....	....	1	....	....	....	....	....	1	10.00
Totals,	....	2	2	1	....	....	1	1	3	....	....	....	10	100.00
Grand totals inside and outside,	....	2	3	2	2	....	3	2	7	5	3	2	31	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	1	1	....	....	....	....	2	....	2	2	....	8	16.33
Falls of slate,	1	1	3	1	2	3	1	1	1	1	....	....	15	30.61
Falls of roof,	....	....	....	....	....	....	....	....	1	....	....	....	1	2.04
Mine cars,	1	....	3	5	....	1	1	1	2	1	....	....	15	30.61
Explosions of gas,	....	3	....	....	....	....	....	....	....	1	....	....	4	8.17
Explosions of powder and dynamite,	1	....	....	....	....	....	....	....	....	....	....	....	1	2.04
Falling into slopes, etc.,	1	....	....	....	....	....	....	....	....	1	....	....	2	4.08
Mules,	....	....	....	....	....	....	....	....	1	....	....	....	1	2.04
Struck by timber,	....	....	....	....	....	....	....	....	....	2	....	....	2	4.08
Totals,	4	5	7	6	2	4	2	4	5	8	2	....	49	100.00
Outside														
Cars,	1	....	1	....	....	....	....	....	....	....	....	....	2	50.00
Timber rolled on him,	....	....	....	....	....	....	....	....	....	....	....	1	1	25.00
By falling,	....	....	....	....	....	1	....	....	....	....	....	....	1	25.00
Totals,	1	....	1	....	....	1	....	....	....	....	....	1	4	100.00
Grand totals inside and outside,	5	5	8	6	2	5	2	4	5	8	2	1	53	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	....	....	1	2	....	....	1	2	1	3	2	12
Miners' laborers,	....	....	....	....	....	....	2	....	1	2	....	....	5
Drivers and runners,	....	....	....	....	....	....	....	....	....	1	....	....	1
Doorboys and helpers,	....	....	....	....	....	....	....	....	1	....	....	....	1
Motor-runners,	....	....	1	....	....	....	....	....	....	....	....	....	1
Topmen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	....	....	1	1	2	....	2	1	4	5	3	2	21
Outside													
Miners,	....	....	....	....	....	....	1	....	....	....	....	....	1
Unhitchers,	....	....	....	....	....	....	....	....	1	....	....	....	1
Slate loaders,	....	....	....	....	....	....	....	....	1	....	....	....	1
Engineers and firemen,	....	1	....	....	....	....	....	....	....	....	....	....	1
Dumpers,	....	1	....	....	....	....	....	....	....	....	....	....	1
Laborers,	....	....	1	1	....	....	....	1	....	....	....	....	3
Jack men,	....	....	1	....	....	....	....	....	....	....	....	....	1
Patchers,	....	....	....	....	....	....	....	....	1	....	....	....	1
Totals,	....	2	2	1	....	....	1	1	3	....	....	....	10
Grand totals inside and outside,	....	2	3	2	2	....	3	2	7	5	3	2	31

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1	3	2	1	1	3	1	3	2	4	....	....	21
Miners' laborers,	2	2	2	3	1	....	....	....	1	3	2	....	16
Drivers and runners,	....	...	1	2	....	1	1	....	2	1	....	....	8
Doorboys and helpers,	....	....	....	....	....	....	....	1	....	....	....	....	1
Loaders,	....	....	1	....	....	....	....	....	....	....	....	....	1
Barn bosses,	1	....	....	....	....	....	....	....	....	....	....	....	1
Patchers,	....	....	1	....	....	....	....	....	....	....	....	....	1
Totals,	4	5	7	6	2	4	2	4	5	8	2	....	49
Outside													
Blacksmiths and carpenters,	....	....	....	....	....	1	....	....	....	....	....	....	1
Dumpmen,	....	....	1	....	....	....	....	....	....	....	....	....	1
Loaders,	1	....	....	....	....	....	....	....	....	....	....	....	1
Laborers,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	1	....	1	....	....	1	....	....	....	....	....	1	4
Grand totals inside and outside,	5	5	8	6	2	5	2	4	5	8	2	1	53

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	2	....	....	....	....	....	....	....	2	2	....	6
Irish,	....	....	....	....	....	....	....	....	....	1	1	....	2
Polish,	....	....	1	....	....	....	2	1	2	2	....	2	10
Hungarian,	....	....	1	....	....	....	....	1	1	....	....	....	3
Italian,	....	....	....	1	....	....	....	....	2	....	....	....	3
Slavonian,	....	....	1	....	1	....	1	....	1	....	....	....	4
Lithuanian,	....	....	....	....	....	....	....	....	1	....	....	....	1
Austrian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Greek,	....	....	....	....	1	....	....	....	....	....	....	....	1
Totals,	....	2	3	2	2	....	3	2	7	5	3	2	31

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	....	1	1	....	1	....	1	2	3	....	...	10
Welsh,	....	1	....	....	....	....	....	....	....	....	....	....	1
Irish,	....	....	....	1	....	....	....	....	....	....	....	....	1
German,	....	....	....	....	....	....	....	1	....	....	....	....	1
Polish,	1	4	2	1	....	3	....	1	2	1	1	....	16
Hungarian,	....	....	2	....	....	....	1	....	....	....	....	1	4
Italian,	2	....	1	1	1	....	....	....	....	....	....	....	5
Slavonian,	....	....	2	2	1	1	1	....	1	1	....	....	9
Lithuanian,	....	....	....	....	....	....	....	1	....	2	1	....	4
Austrian,	....	....	....	....	....	....	....	....	....	1	....	....	1
Russian,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	5	5	8	6	2	5	2	4	5	8	2	1	53

TABLE 1 —Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
G. B. Markle Co.															
Jeddo No. 4 Colliery:															
Jeddo No. 4, ...	Slope, ...	Gaseous, ..	3 Fans, ..	25	7.10	7.4	60	2.3	Guibal, ..	Steam,.....	4	61,500	41,700	68,800	102
				16	4.6	4.9	75	1			4	32,300	28,000	44,700	118
				16	5	5	80	1.3			2	31,800	20,500	44,500	90
Jeddo No. 4, ...	Shaft,.....	Non-gas., .	Fan, ...	16	4.10	4.8	82	.5			3	45,000	40,000	49,000	76
Ebervale Colliery:															
Ebervale, ...	Slope, ...	Gaseous, ..	2 Fans, ..	10	3.1	2.7	133	.9	Guibal, ...	Steam,.....	2	18,520	11,440	17,121	39
				16	4.6	4.7	97	1.8			7	53,924	23,000	54,200	99
Jeddo No. 7 Colliery:															
Primrose and Holmes,	Slope, ...	Non-gas., .	Fan, ...	16	4.6	4.8	50	6	Guibal, ...	Electricity,.	2	37,500	20,500	39,000	52
Mammoth and Wharton,	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	1	10,000	7,700	11,000	25
Highland No. 5 Colliery:															
Highland No. 5, ...	Slope, ...	Gaseous, ..	2 Fans, ..	16	4.6	4.8	100	1.9	Guibal, ...	Steam,.....	5	86,080	62,000	92,200	145
				16	4.5	4.8	100	1.9			3	35,000	21,000	45,000	97
Highland Nos. 8, 9, 10,	Slope, ...	Non-gas., .	Fan, ...	7	3.8	1.6	100	1			3	27,805	18,070	33,070	68
Highland No. 2 Colliery:															
Highland No. 1, ...	Slope, ...	Gaseous, ..	Natural, ..	.....	.....	.....	.....	.....	....	.....	3	37,000	33,900	41,000	129
Highland No. 2, ...	Slope, ...	Gaseous, ..	Fan, ...	16	4.10	4.10	70	.8	Guibal, ...	Steam,.....	2	27,000	26,000	29,000	116
Highland No. 6, ...	Slope, ...	Non-gas., .	Fan, ...	16	4.6	4.9	90	1	Guibal, ...	Steam,.....	7	64,500	45,000	76,000	132
Lehigh Valley Coal Co.															
Hazleton No. 1 Colliery:															
Hazleton No. 1, ...	Slope, ...	Gaseous, ..	Fan, ...	20	6	6	62	.8	Guibal, ...	Steam,.....	10	80,000	30,600	81,200	112
Hazleton No. 8, ...	Slope, ...	Gaseous, ..	2 Fans, ..	16	4	4.6	50	.6	Guibal, ...	Steam,.....	5	32,260	17,920	38,020	60
				16	5	5.6	55	.4							

Hazleton Shaft Colliery:															
Hazleton Shaft,	Shaft,	Gaseous,	Fan,	20	7	6	65	.6	Guibal,	Steam,	10	115,900	48,900	137,400	201
Hazleton No. 3,	Slope,	Gaseous,	Fan,	17	5	6	65	.5	Guibal,	Steam,	5	60,400	40,000	65,000	80
Hazleton No. 5,	Slope,	Gaseous,	Fan,	14	4.9	4	98	.5	Guibal,	Steam,	6	53,600	45,000	60,200	117
Stockton No. 2,	Slope,	Non-gas.,	Fan,	20	6.9	4.6	40	.5	Guibal,	Electricity,	5	19,000	17,000	19,400	26
Stockton No. 7,	Slope,	Non-gas.,	Natural,								2	19,500	13,400	19,600	40
Spring Mountain and Spring Brook Colliery:															
Spring Brook No. 1,	Slope,	Gaseous,	Fan,	16	4	4	60	.3	Guibal,	Steam,	4	37,100	27,600	37,600	87
Spring Brook No. 2,	Slope,	Gaseous,	Fan,	14	4.9	4	70	.3	Guibal,	Steam,	4	49,604	33,100	50,800	117
Spring Mountain No. 4,	Slope,	Non-gas.,	Fan,	20	6.9	4.6	40	.5	Guibal,	Steam,	3	49,100	39,900	51,000	65
Spring Mountain—Primrose,	Slope,	Non-gas.,	Fan,	3.6	3	1.9	225		Sirocco,	Electricity,	1	20,000	18,000	20,500	6
Coxe Brothers and Co., Inc. Drifton Colliery:															
Drifton No. 1,	Slope,	Gaseous,	Fan,	16	4	4	60		Guibal,	Steam,	8	57,400	57,200	63,500	87
Drifton No. 2,	Slope,	Gaseous,	2 Fans,	20	4	5.6	80		Guibal,	Steam,	8	162,400	49,000	164,000	91
				17	4	4	80								
Eckley and Buck Mountain Colliery:															
Eckley No. 1,	Slope,	Non-gas.,	Natural,								3	14,300	10,400	18,300	8
Eckley No. 2,			Natural,								3	30,000	14,100	32,300	31
Eckley No. 6,			Fan,	20	4	5.6	80		Guibal,	Steam,	3	19,700	17,000	21,600	34
Eckley No. 10,			Natural,								4	51,000	34,000	52,000	42
Buck Mountain No. 11,			Natural,								3	15,600	11,800	17,000	36
Deringer Colliery:															
Deringer,	Drift,	Gaseous,	Fan,	20	6	5.6	90		Guibal,	Steam,	8	68,000	66,500	69,000	108
Gowen Colliery:															
Gowen Nos. 1 and 3,	Tunnel,	Gaseous,	Fan,	16	4	4	100		Guibal,	Steam,	8	63,800	42,700	64,100	139
Gowen No. 4,	Slope,	Gaseous,	Fan,	20	7	6	95		Guibal,	Steam,	7	53,600	36,800	64,500	65
Tomhicken Colliery:															
Tomhicken,	Drift,	Non-gas.,	Natural,								2	16,200	9,200	17,100	42
Pardee Brothers and Co. Lattimer Colliery:															
Lattimer No. 1,	Slope,	Non-gas.,	Natural,								*				11
Lattimer No. 8,	Slope,	Gaseous,	Fan,	4	2.6	2.6	240		Guibal,	Steam,	2	30,000	28,500	32,000	65
Lattimer Nos. 9 and 12,	Slope,	Gaseous,	Fan,	16	4.6	4.3	95	2	Guibal,	Steam,	8	110,000	82,500	115,000	329
Lattimer No. 11,	Slope,	Non-gas.,	Natural,								*				41
Lattimer No. 22,	Slope,	Non-gas.,	2 Fans,	7	3.25	1.42	150	1	Guibal,	Steam,	2	96,000	60,000	120,000	72
				8	3.25	1.67	145	1	Sturtevant,	Steam,					
Lattimer No. 26,	Slope,	Non-gas.,	Fan,	6	3.25	1.42	195	2	Guibal,	Electricity,	2	30,000	25,000	32,000	12
Lattimer Nos. 24 and 27,	Slope,	Non-gas.,	Natural,								*				52
Lattimer No. 17,	Shaft,	Gaseous,	Natural,								4	50,000	32,000	55,000	133

*Robbing; no air measurements taken.

TABLE I.—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
A. Pardee and Co.															
Cranberry Colliery:															
Cranberry No. 1, ...	Slope, ...	Gaseous, ..	3 Fans, .	16	4.10	4	70	.75	Guibal, ...	Steam,.....	9	116,000	85,000	131,000	360
				16	5.4	4	70	.75							
				16	4.10	4	70	.7							
Cranberry Nos. 5 and 10,	Slope, ...	Gaseous, ..	Fan, ...	16	4.10	4	70	.5	Guibal, ...	Steam,.....	3	65,000	46,500	68,000	186
Cranberry No. 6, ...	Slope, ...	Non-gas., .	Fan, ...	16	4.6	4	70	1			5	53,000	35,000	56,000	167
Cranberry No. 8, ...	Slope, ...	Gaseous, ..	Fan, ...	16	4.10	4	70	1			1	50,000	30,000	55,000	72
C. M. Dodson and Co.															
Beaver Brook Colliery:															
Beaver Brook No. 5, ..	Slope, ...	Gaseous, ..	Natural, ..	.....	.....	.....	.....	.....	.....	.....	3	8,000	7,500	10,000	31
Beaver Brook No. 6, ..	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	2	5,000	3,000	8,000	10
Beaver Brook No. 10, .	Slope, ...	Gaseous, ..	Fan, ...	16	4.6	5	80	.....	Guibal, ...	Steam,.....	4	60,000	49,000	62,000	180
Beaver Brook No. 11, .	Slope, ...	Gaseous, ..	Fan, ...	16	4.6	5	90	.....	Guibal, ...	Steam,.....	4	65,000	50,500	67,000	191
Beaver Brook No. 15, .	Slope, ...	Gaseous, ..	Natural, ..	.....	.....	.....	.....	.....	.....	.....	2	5,500	3,000	6,000	10
Beaver Brook No. 16, .	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	1	4,000	2,900	6,000	14
Beaver Brook No. 17, .	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	1	3,000	2,500	5,000	12
Harwood Coal Co.															
Harwood Colliery:															
Harwood No. 1, ...	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	46
Harwood No. 5, ...	Slope, ...	Gaseous, ..	Fan, ...	16	4.6	4.3	72	.....	Guibal, ...	Steam,.....	4	55,000	40,000	60,000	153
Harwood No. 15, ...	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	4
Harwood No. 16, ...	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	20

†Idle.

Harwood No. 21,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	3
Harwood No. 31,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	40
Harwood-Humboldt Road,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	51
Upper Lehigh Coal Co.															
Upper Lehigh Colliery:															
Upper Lehigh No. 1,†	Slope,	Non-gas.,	Fan,	10	3	2	70	.....	Guibal, ...	Steam, ...	....	.....	.....	.....	....
Upper Lehigh No. 2,†	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	....
Upper Lehigh No. 5,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	2	15,000	12,000	16,000	31
Upper Lehigh No. 12,	Slope,	Non-gas.,	Fan,	5.6	3	1.6	275	.....	Guibal, ...	Steam, ...	3	22,000	15,000	23,000	18
J. S. Wentz and Co.															
Hazle Brook Colliery:															
Hazle Brook No. 1,	Slope,	Gaseous,	Natural,	.....	.....	.....	.....	.....	.....	.....	3	35,000	22,000	36,000	28
Hazle Brook No. 5,	Slope,	Gaseous,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	21,000	12,000	22,000	14
Hazle Brook No. 9,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	5,000	3,000	6,500	8
Hazle Brook No. 10,	Slope,	Gaseous,	Natural,	.....	.....	.....	.....	.....	.....	.....	2	10,000	6,000	11,000	14
M. S. Kemmerer and Co.															
Sandy Run Colliery:															
Sandy Run No. 2,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	104
Sandy Run No. 5,				.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	54
Sandy Run No. 8,				.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	9
Sandy Run No. 10,				.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	12
Harleigh Brookwood Coal Co.															
Harleigh Colliery:															
Buck Mountain,	Slope,	Non-gas.,	Fan,	12	3.7	3	90	.....	Blackman, ..	Electricity,	2	30,000	22,000	31,000	69
Fish Tail,	Slope,	Non-gas.,	Fan,	7	3.6	3	225	.....	Guibal, ...	Steam, ...	1	25,000	17,000	26,000	46
Spear Point,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	30,000	22,000	31,000	51
Hazle Mountain Coal Co.															
Hazle Mountain Colliery:															
Hazle Mountain No. 1,	Slope,	Non-gas.,	Fan,	16	6	4.6	72	1.3	Guibal, ...	Steam, ...	3	48,000	32,000	49,000	86
Hazle Mountain No. 5,	Slope,	Non-gas.,	Fan,	16	4	3.11	85	1.3	Guibal, ...	Steam, ...	2	49,500	46,000	50,000	46
Wolf Coal Co.															
Wolf Colliery:															
Wolf No. 3,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	10,000	7,000	10,500	10
Wolf No. 5,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	9,000	6,000	8,500	22
Wolf No. 6,	Slope,	Non-gas.,	Fan,	8	2.6	1.6	70	1	Guibal, ...	Steam, ...	2	18,000	16,000	22,000	42
Thomas R. Reese and Son															
Dusky Diamond Colliery:															
Dusky Diamond No. 2,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	3
Dusky Diamond No. 3,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	....

*No air measurements taken.
†Idle.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
G. B. Markle Co.						
Jeddo No. 4 and Ebervale,	Luzerne,	A. B. Jessup, General Manager.	Jeddo,	G. P. Troutman, Assistant Gen. Mgr.	Jeddo,	Lehigh Valley
Jeddo No. 7,						
Highland No. 5,						
Highland No. 2,						
Lehigh Valley Coal Co.						
Hazleton No. 1,						
Hazleton Shaft,						
Spring Mountain and Spring Brook.	Luzerne,	Thomas Thomas,	Wilkes-Barre,	W. H. Davies,	Hazleton,	Lehigh Valley
Spring Brook Washery,	Carbon,					
Coxe Brothers and Co., Inc.						
Drifton,						
Eckley and Buck Mountain,						
Deringer, Gowen and Tomhicken.	Luzerne,	Thomas Thomas,	Wilkes-Barre,	W. H. Davies,	Hazleton,	Lehigh Valley
Eckley Washery,						
Pardee Brothers and Co., Inc.						
Lattimer,	Luzerne,	Calvin Pardee, Jr.,	Lattimer Mines,			Lehigh Valley
A. Pardee and Co.						
Cranberry,	Luzerne,	Frank Pardee,	Hazleton,			Lehigh Valley
C. M. Dodson and Co.						
Beaver Brook,	Luzerne,	J. B. Connell,	Beaver Brook,	W. C. Roth,	Beaver Brook,	L. V. and C. R. R. of N. J.
Harwood Coal Co.						
Harwood,	Luzerne,	Charles Dorrance, Jr.,	Hazleton,			Lehigh Valley
Upper Lehigh Coal Co.						
Upper Lehigh,	Luzerne,	T. E. Snyder,	Hazleton,	C. H. Rohland,	Upper Lehigh,	C. R. R. of N. J.
J. S. Wentz and Co.						
Hazle Brook,	Luzerne,	T. E. Snyder,	Hazleton,	C. H. Rohland,	Upper Lehigh,	Lehigh Valley
M. S. Kemmerer and Co.						
Sandy Run,	Luzerne,	M. S. Kemmerer,	New York, 143 Liberty Street	J. P. Powell,	Sandy Run,	C. R. R. of N. J.

Harleigh Brookwood Coal Co.						
Harleigh,	Luzerne,	Frank A. Hill,	Pottsville,	I. D. Thomas,	Hazleton,	Lehigh Valley
Hazle Mountain Coal Co.						
Hazle Mountain,	Luzerne,	W. R. McTurk,	Philadelphia,	Morton H. McTurk,	Hazleton,	Lehigh Valley
Wolf, Wolf Coal Co.	Luzerne,	Joseph G. Saricks,	Freeland,			Lehigh Valley
Thomas R. Reese and Son						
Dusky Diamond,	Luzerne,	Thomas R. Reese,	Audenried,			C. R. R. of N. J.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
G. B. Markle Co.													
Jeddo No. 4 and Ebervale,	Luzerne,	527,444	35,235	2,898	565,577	293	994	5	3	40,025	281,124	.....	54
Jeddo No. 7,		288,039	31,128	19,427	338,594	289	265	.....	2	25	42,047	.....	15
Highland No. 5,		470,839	27,746	735	499,320	301	708	2	3	14,350	262,356	.....	57
Highland No. 2,		253,589	35,098	12,731	301,418	300	572	.....	4	175	112,589	.....	40
Totals,		1,539,911	129,207	35,791	1,704,909	.....	2,539	7	12	54,575	698,116	.....	166
Lehigh Valley Coal Co.													
Hazleton No. 1,	Luzerne,	189,450	18,653	59,144	267,247	219	594	.....	1	4,300	208,220	.....	37
Hazleton Shaft,	Luzerne,	274,029	75,690	3,977	353,696	227	901	8	7	10,100	334,512	.....	22
Spring Mountain and Spring Brook,	Luzerne,	277,009	60,533	4,806	342,348	225	768	4	3	90,575	117,694	.....	52
Spring Brook Washery,	Carbon,	43,780	.....	.....	43,780	159	18	.....	.....	.....	.....	.....	.....
Totals,		784,268	154,876	67,927	1,007,071	.....	2,281	12	11	104,975	660,426	.....	111
Coxe Brothers and Co., Inc.													
Drifton,	Luzerne,	304,439	58,138	6,653	369,230	225	583	2	.....	64,275	96,190	.....	56
Eckley and Buck Mountain,		242,877	9,601	4,668	257,146	227	317	1	.....	2,700	81,324	.....	44
Deringer, Gowen and Tomhicken,		246,671	34,341	2,657	283,669	224	598	1	2	25,400	160,887	.....	57
Eckley Washery,		4,358	29,210	1,140	34,708	218	23	.....	.....	.....	.....	.....	.....
Totals,		798,345	131,290	15,118	944,753	.....	1,521	4	2	92,375	338,401	.....	157
Pardee Brothers and Co., Inc.													
Lattimer,	Luzerne,	588,720	64,000	7,034	659,754	289	1,112	.....	6	2,325	243,535	.....	72

A. Pardee and Co.													
Cranberry,	Luzerne,	521,004	70,080	7,881	598,965	264	1,569	2	8	22,600	415,000	.....	180
C. M. Dodson and Co.													
Beaver Brook,	Luzerne,	414,975	31,000	1,130	447,105	302	749	2	8	76,875	198,325	.....	75
Harwood Coal Co.													
Harwood,	Luzerne,	149,242	32,000	28,175	209,417	232	452	1	.....	425	50,188	.....	35
Upper Lehigh Coal Co.													
Upper Lehigh,	Luzerne,	148,016	21,228	2,060	171,304	253	254	.....	.....	625	44,122	.....	12
J. S. Wentz and Co.													
Hazle Brook,	Luzerne,	132,292	22,760	1,073	156,125	241	264	2	2	37,397	13,975	.....	24
M. S. Kemmerer and Co.													
Sandy Run,	Luzerne,	110,050	14,550	1,158	125,758	256	281	.....	2	75	22,604	.....	30
Harleigh Brookwood Coal Co.													
Harleigh,	Luzerne,	106,239	10,500	732	117,471	192	245	1	1	.....	64,300	.....	18
Hazle Mountain Coal Co.													
Hazle Mountain,	Luzerne,	68,982	18,252	1,186	88,420	202	237	.....	1	.....	35,250	.....	36
Wolf Coal Co.													
Wolf,	Luzerne,	4,745	146	.....	4,891	225	90	.....	.....	12,250	48,730	.....	6
Thomas R. Reese and Son													
Dusky Diamond,	Luzerne,	101	400	3,658	4,159	242	9	.....	.....	3,750	2,000	.....	1
Grand totals,	....	5,266,890	700,299	172,923	6,240,102	.....	11,603	31	73	468,247	2,834,972	.....	923

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
G. B. Markle Co.,	Luzerne,	.....	.....	32	10,200	10,200	19	6	12	57	10,415	12	16,421	11,400	5	8
Lehigh Valley Coal Co.,		.....	.....	58	9,220	9,220	9	.....	14	65	8,725	21	19,560	8,600	5	1
Coxe Brothers and Co., Inc.,		.....	.....	49	9,375	9,375	19	6	.....	52	4,855	12	14,400	8,150	1	6
Pardee Brothers and Co., Inc.,		.....	.....	12	4,000	4,000	11	.....	3	33	3,800	*	.....	.....	.....	2
A. Pardee and Co.,		11	330	33	6,295	6,625	16	.....	.....	76	18,550	15	23,100	7,600	.....	1
C. M. Dodson and Co.,		.....	.....	25	3,600	3,600	2	.....	.....	19	1,400	9	12,100	5,750	.....	2
Harwood Coal Co.,		.....	.....	12	1,800	1,800	3	.....	.....	16	1,005	6	7,100	3,600	.....	1
Upper Lehigh Coal Co.,		.....	.....	11	2,480	2,480	7	.....	.....	19	2,181	3	3,200	3,200	2	1
J. S. Wentz and Co.,		.....	.....	11	1,650	1,650	4	.....	.....	22	885	4	5,300	5,300	.....	2
M. S. Kemmerer and Co.,		.....	.....	4	890	890	1	.....	.....	8	446	2	1,420	1,420	.....	.....
Harleigh Brookwood Coal Co.,		.....	.....	8	1,000	1,000	2	.....	.....	.....	.....	5	3,700	1,700	.....	1
Hazle Mountain Coal Co.,		.....	.....	10	1,480	1,480	1	.....	.....	13	1,030	6	6,300	2,000	.....	2
Wolf Coal Co.,		.....	.....	3	375	375	.....	.....	.....	4	210	3	845	650	.....	.....
Thomas R. Reese and Son,		.....	.....	1	125	125	.....	.....	.....	2	60	†	.....	.....	.....	.....
Totals,		11	330	269	52,490	52,820	94	12	29	386	53,562	98	113,446	59,370	13	27

*Jeddo Tunnel drainage.
†Drainage into Beaver Brook.

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
G. B. Markle Co., ...	Luzerne, ...	8	12	6	584	571	92	32	18	60	404	1,787	1	5	33	89	58	29	10	527	752	2,539
Lehigh Valley Coal Co., ...	Luzerne, ...	9	22	....	586	245	63	16	22	256	365	1,584	..	4	52	84	24	73	14	446	697	2,281
	Carbon, ...																					
Coxe Brothers and Co., Inc.,		7	16	....	537	141	89	10	11	43	183	1,037	..	5	34	48	14	27	10	346	484	1,521
Pardee Brothers and Co., Inc., ...		2	11	2	432	144	43	2	....	56	43	735	1	4	37	68	32	20	8	207	377	1,112
A. Pardee and Co., ...		6	11	....	420	368	55	59	16	81	66	1,082	..	2	57	68	32	16	3	309	487	1,569
C. M. Dodson and Co., ...		1	4	1	166	191	45	8	9	37	30	492	2	5	21	37	40	8	5	139	257	749
Harwood Coal Co., ...		1	4	....	138	107	20	3	4	35	5	317	1	3	15	10	13	4	5	84	135	452
Upper Lehigh Coal Co., ...	Luzerne, ...	1	2	....	20	14	5	....	2	7	8	59	1	1	13	11	17	3	2	147	195	254
J. S. Wentz and Co., ...		1	2	....	55	15	19	....	5	26	5	128	..	1	10	22	19	2	2	80	136	264
M. S. Kemmerer and Co., ..		1	2	....	48	40	15	....	2	44	27	179	1	1	8	13	17	33	2	27	102	281
Harleigh Brookwood Coal Co., ...		1	1	....	79	52	11	1	8	9	13	175	1	1	6	6	21	6	2	27	70	245
Hazle Mountain Coal Co.,...		1	1	2	48	33	15	....	8	....	24	132	1	1	6	8	19	4	2	64	105	237
Wolf Coal Co., ...		1	....	....	40	16	4	2	3	4	4	74	1	..	2	5	....	....	1	7	16	90
Thomas R. Reese and Son,		1	....	....	2	3	....	....	....	....	.....	6	..	..	....	1	....	....	....	2	3	9
Totals, ...	.....	41	88	11	3,155	1,940	476	133	108	658	1,177	7,787	10	33	294	470	306	225	66	2,412	3,816	11,603

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
G. B. Markle Co.,	Luzerne,	26	22	24	24	25	24	26	25	25	26	24	25	296
Lehigh Valley Coal Co.,	Luzerne,	13	11	20	19	21	23	16	17	22	17	14	14	207
	Carbon,													
Coxe Brothers and Co., Inc.,		10	12	22	21	22	21	15	18	22	23	18	20	224
Pardee Brothers and Co., Inc.,		24	23	23	23	24	24	26	24	25	25	24	24	289
A. Pardee and Co.,		25	22	24	20	14	20	20	20	25	26	24	24	264
C. M. Dodson and Co.,		24	24	25	25	25	26	26	25	25	26	25	26	302
Harwood Coal Co.,		20	18	20	18	21	17	20	16	22	20	19	21	232
Upper Lehigh Coal Co.,	Luzerne,	23	21	22	21	19	22	19	21	23	20	18	24	253
J. S. Wentz and Co.,		22	19	21	21	20	20	19	20	22	19	18	21	242
M. S. Kemmerer and Co.,		22	23	23	19	22	21	20	18	22	21	22	23	256
Harleigh Brookwood Coal Co.,		26	21	25	22	24	26	24	25	25	26	24	24	291
Hazle Mountain Coal Co.,		16	14	19	18	17	15	14	18	18	18	17	18	202
Wolf Coal Co.,		13	11	22	21	22	22	14	16	23	23	18	20	225
Thomas R. Reese and Son,		24	23	23	20	23	10	11	9	26	23	26	24	242

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Feb. 20	James Mulhearn, ...	American, ..	Dumper, ...	43	S.	....	....	Hazleton Shaft,...	Luzerne,..	Instantly killed. Run over by railroad cars that got beyond control of car runners. Outside.
21	John E. Kite, ...	American, ..	Engineer, ...	18	S.	....	....	Spring Mountain,.		Instantly killed by machinery. Outside.
March 3	Adam Martinshect, ..	Hungarian, .	Jack-man, ...	56	S.	...	....	Hazle Brook, ...		Fatally injured. Run over by cars in stripping. Outside.
17	Samuel Olinic, ...	Polish,.....	Laborer, ...	32	M.	1	3	Hazle Brook, ...		Fatally injured. Squeezed between steam shovel and side of plane. Outside.
20	Mike Olsovish, ...	Slavonian, ..	Motor-runner,	20	S.	....	....	Hazleton Shaft, ..		Fatally injured. Run over by cars in tunnel.
April 11	Cosmon Santesi, ...	Italian, ...	Laborer, ...	26	M.	1	1	Jeddo No. 4, ...		Fatally injured by car toppling over on him. Outside.
29	John Spider, ...	Austrian, ..	Miner, ...	48	M.	1	4	Spring Brook, ...		Fatally injured by fall of slate at face of breast.
May 1	Steve Selepic, ...	Slavonian, ..	Miner, ...	25	M.	1	1	Hazleton Shaft, ..		Instantly killed by fall of slate at face of breast.
2	Steve Mehalock, ...	Greek, ...	Miner, ...	48	M.	1	....	Jeddo No. 4, ...		Instantly killed by fall of slate at face of robbing.
July 2	George Sholtis, ...	Slavonian, ..	Laborer, ...	44	M.	1	6	Jeddo No. 4, ...		Fatally injured by fall of slate in face of gangway.
10	Frank Klakow, ...	Polish.....	Laborer, ...	22	S.	....	....	Cranberry, ...		Instantly killed by fall of coal at face of breast.
21	Joe. Vulansanovitch,..	Polish,.....	Miner, ...	38	M.	1	4	Cranberry, ...		Fatally scalded by steam on mine locomotive when stay bolt blew out of boiler. He was riding down from the slope to the breaker on his way home. Outside.
Aug. 21	John Osatchuk, ...	Hungarian, .	Laborer, ...	23	S.	....	....	Eckley, ...		Instantly killed by machinery on steam shovel. Outside.
28	Adam Good, ...	Polish,.....	Miner, ...	37	M.	1	5	Spring Mountain,.		Fatally injured by fall of coal in breast which caught him on the pitch and swept him down to bottom.
Sept. 1	Mathias Aurbensky, .	Polish,.....	Miner, ...	35	M.	1	2	Deringer, ...		Instantly killed by fall of coal in cross-cut.
2	Peter Kwezefski, ...	Polish,.....	Laborer, ...	20	S.	....	....	Spring Brook, ...		Instantly killed by fall of coal at face of breast.

TABLE 4—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Sept. 9	John Greshko, ...	Hungarian, .	Patcher, ...	21	S.	....	....	Drifton Nos. 1 and 2		Fatally injured by falling under cars. Outside.
14	Adam Rakyus, ...	Lithuanian,	Miner, ...	43	M.	1	3	Harwood, ...		Instantly killed by fall of slate on buggy gangway.
15	George Lutz, ...	Slavonian, ..	Doorman, ...	63	S.	....	....	Hazleton Shaft, ..		Fatally injured by cars on counter gangway.
28	Salvador Harlo, ..	Italian, ...	Unhitcher, ..	21	S.	....	....	Jeddo No. 4, ..		Instantly killed. Struck by runaway loaded car at bottom of breaker plane. The hitching staple of car broke at top of breaker, just as car was ready to be dumped, and the car ran down the plane without the rope and caught the two men. Outside.
	George Chervosser,..	Italian, ...	Slate loader,	21	S.	....	....			
Oct. 14	Andrew McKelvey,..	Irish, ...	Miner, ...	53	M.	1	4	Hazleton Shaft,	Luzerne,..	Fatally injured by runaway loaded car at top landing of an inside slope, which has a backswitch landing. The clevis pin worked out allowing the car to run back without the chain and crash into a wooden bridge that crossed the empty car track, and the debris was swept against the men as they were running to a place of safety, pinning them against the lower rib.
	Manus O'Donnell, ..	American, ..	Topman, ...	22	S.	....	....			
	Adam Douglas, ...	Polish,.....	Laborer, ...	37	M.	1	....			
28	Joe. Yeshunkofskie, ..	Polish,.....	Laborer, ...	34	M.	1	6	Highland No. 5,		Fatally injured by fall of slate at face of robbing.
31	Daniel Ferry, ...	American, ..	Driver, ...	22	S.	....	....	Drifton Nos. 1 and 2		Fatally injured by being squeezed between mule and loaded car that he was pulling into bottom of slope, when spreader chain got fast in gib rail of frog.
Nov. 7	Andrew Burns, ...	Irish, ...	Miner, ...	60	S.	....	....	Hazleton Shaft, ..		Fatally injured by fall of slate near face of breast.
17	William Howells, ...	American, ..	Miner, ...	47	S.	....	....	Highland No. 5,		Instantly killed by fall of coal at face of robbing.
23	George Warren, ...	American, ..	Miner, ...	56	M.	1	5	Beaver Brook, ...		Instantly killed by fall of slate at face of robbing.

Dec.	16	George Seamans, ...	Polish,.....	Miner, ...	33	M.	1	3	Harleigh, ...	Luzerne,..	Fatally injured by being caught between a falling prop and a projection on chute, while repairing side of gangway.
	30	John Deprovish, ...	Polish,.....	Miner, ...	33	M.	1	3	Beaver Brook, ...		Instantly killed by being precipitated down an old breast a distance of 200 feet. The bottom of the counter gangway gave way under him while he was in the act of charging a hole in face of gangway.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 1	Thomas Woodring, ..	American, ..	Stable-boss, ...	53	M.	Harleigh, ...	Luzerne,..	Knee cap fractured by falling down slope.
10	Joseph Pazoe, ...	Italian, ...	Loader, ...	21	S.	Jeddo No. 4, ...		Leg squeezed between bumpers of cars. Outside.
22	Mike Clay, ...	Polish,.....	Miner, ...	25	S.	Hazleton No. 1, ...		Face and hands injured by explosion of powder in breast.
	Severa Rovet, ...	Italian, ...	Laborer, ...	18	S.	Hazle Brook, ...		Wrist fractured. Arm caught between top and car when riding up slope.
29	Andrew Zentak, ...	Russian, ...	Laborer, ...	20	S.	Lattimer, ...		Spine dislocated by fall of slate in face of gangway.
Feb. 6	Richard Kelshaw, ...	Welsh, ...	Miner, ...	41	M.	Beaver Brook, ...		Leg fractured by fall of coal at face of sinking slope.
23	Joseph Petula, ...	Polish,.....	Miner, ...	29	M.	Cranberry, ...		Face and hands burned by explosion of gas in breast.
	Fred. Leclu, ...	Polish,.....	Laborer, ...	21	S.			Face and hands burned.
	Joseph Rubble, ...	Polish,.....	Miner, ...	46	M.			Face, neck and hands burned.
28	Mike Hallishko, ...	Polish,.....	Laborer, ...	24	S.	Beaver Brook, ...		Leg fractured by fall of slate in face of breast.
March 5	Michael A. Matti, ..	Slavonian, ..	Driver, ...	21	M.	Ebervale, ...		Sternum fractured and back and side bruised by falling under car on gangway near bottom of slope.
6	Julius Bodine, ...	Hungarian, .	Laborer, ...	36	M.	Beaver Brook, ...		Leg fractured by fall of slate in face of gangway.
	Michael Lopo, ...	Slavonian, ..	Laborer, ...	51	M.	Lattimer, ...		Leg fractured by fall of slate in face of breast.
	John Mehalko, ...	Hungarian, .	Miner, ...	29	M.	Lattimer, ...		Leg fractured by fall of slate in face of breast.
17	Simon Augustatus, ..	American, ..	Patcher, ...	18	S.	Hazleton Shaft, ...		Ankle fractured by cars on gangway.
19	Joseph Rozovitch, ...	Polish,.....	Loader, ...	24	M.	Hazleton Shaft, ...		Collar bone fractured by cars on gangway.
30	John Gulsh, ...	Polish,.....	Miner, ...	51	M.	Hazleton Shaft, ...		Ribs fractured and face lacerated by fall of coal in breast.
31	Shelt Kazmo, ...	Italian, ...	Dumper, ...	22	S.	Jeddo No. 7, ...		Spine fractured by falling under locomotive. Outside.
April 14	Michael Lingo, ...	Slavonian. ..	Driver, ...	22	S.	Beaver Brook, ...		Body squeezed between cars on gangway.

April	15	Michael Bove, ...	American, ..	Driver, ...	23	M.	Lattimer, ...			Body squeezed by falling under cars on gangway.
	18	Michael Litchko, ..	Slavonian, ..	Laborer, ...	22	S.	Sandy Run, ...			Leg fractured.
		Philip Alberta, ...	Italian, ...	Laborer, ...	24	S.				Small bone in leg fractured by derailed timber truck on gangway.
	21	Kazimer Romanofski,	Polish, ...	Laborer, ...	22	S.	Highland No. 2, ...			Concussion of brain. Small car door struck him on head.
		Patrick Ward, ...	Irish, ...	Miner, ...	51	M.	Beaver Brook, ...			Leg fractured by fall of slate in face of breast.
May	9	John Kontralia, ...	Slavonian, ..	Laborer, ...	42	M.	Spring Brook, ...			Contusion of legs by fall of slate at face of breast.
	18	Rock Cusata, ...	Italian, ...	Miner, ...	42	M.	Lattimer, ...			Contusion of back and hips by fall of slate at face of robbing.
June	17	Harold McLean, ...	American, ..	Runner, ...	21	S.	Jeddo No. 4, ...			Hips and leg contused between cars at bottom of slope.
	19	John Korzinskie, ...	Polish, ...	Miner, ...	31	M.	Highland No. 2, ...			Head and hand lacerated and legs bruised by fall of slate at face of breast.
	22	Stanley Bora, ...	Polish, ...	Miner, ...	42	M.	Spring Mountain, ...			Head lacerated by fall of slate at face of breast.
	25	Joseph Bonyas, ...	Polish, ...	Miner, ...	39	M.	Highland No. 5, ...			Leg fractured by fall of slate in face of gangway.
	27	Peter Shambora, ...	Slavonian, ..	Carpenter, ...	66	M.	Hazle Brook, ...			Skull and collar bone fractured by falling from breaker. Outside.
July	9	John Bodor, ...	Hungarian, .	Driver, ...	30	M.	Highland No. 5, ...			Leg fractured by derailed empty car on gangway.
	20	Michael Krul, ...	Slavonian, ..	Miner, ...	32	M.	Highland No. 2, ...	Luzerne, ..		Spine fractured by fall of slate in cross-chute in breast.
Aug.	4	Herman Radtkey, ...	German, ...	Miner, ...	62	M.	Cranberry, ...			Leg fractured by fall of coal at face of gangway.
	6	Joseph Cobinus, ...	Lithuanian,	Door-tender, ...	50	M.	Hazleton Shaft, ...			Head cut and body injured. Struck by trip of cars on gangway.
	7	Francis Baron, ...	American, ..	Miner, ...	36	M.	Deringer, ...			Leg fractured by fall of slate in face of gangway.
	14	Frank Balon, ...	Polish, ...	Miner, ...	40	M.	Jeddo No. 7, ...			Leg fractured by fall of coal at face of breast.
Sept.	10	Adam Adeletski, ...	Polish, ...	Laborer, ...	23	M.	Cranberry, ...			Hip dislocated by fall of rock at face of robbing.
	18	Stanley Smith, ...	American, ..	Driver, ...	17	S.	Hazle Mountain, ...			Hip squeezed between car and prop on gangway.
	21	Nick Plashin, ...	Slavonian, ..	Driver, ...	42	M.	Deringer, ...			Collar bone fractured by being thrown against brattice by mule.
	22	Adam Zahotsky, ...	Polish, ...	Miner, ...	36	M.	Highland No. 2, ...			Skull fractured. Head was caught between timber and car on gangway.
	30	John Kepp, ...	American, ..	Miner, ...	48	M.	Cranberry, ...			Leg fractured by fall of slate in face of gangway.
Oct.	12	Martin Cherchois, ...	Lithuanian,	Miner, ...	36	M.	Hazleton Shaft, ...			Skull fractured by falling down manway of breast.
	14	Frank Musluski, ..	Lithuanian,	Laborer, ...	23	S.	Hazleton Shaft, ...			Ankle fractured.
		John Hominsick, ..	Slavonian, ..	Driver, ...	22	S.				Leg fractured. Struck by debris from a bridge that was displaced by a loaded car that ran away down backswitch head of an underground slope. The clevis pin worked out, which allowed the car to run back without the chain. Two other men were fatally injured.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 16	George Sandrock, ...	American, ..	Miner, ...	24	S.	Lattimer, ...	Luzerne, ..	Ankle and foot bruised by fall of coal in face of breast.
	Steve Corranis, ...	Austrian, ..	Miner, ...	36	M.	Spring Mountain, ...		Scalp and neck lacerated by fall of slate in face of breast.
19	James Shaver, ...	American, ..	Laborer, ...	52	M.	Cranberry, ...		Ribs and collar bone fractured. Caught between car and rib when jack slipped from under car that they were retracking on gangway.
26	Joseph Lincavish, ...	Polish, ...	Laborer, ...	26	S.	Cranberry, ...		Face and hands burned by explosion of gas in breast.
27	Peter Marley, ...	American, ..	Miner, ...	34	S.	Highland No. 5, ...		Leg fractured by fall of coal in face of breast.
Nov. 28	William Judge, ...	Lithuanian,	Laborer, ...	20	S.	Beaver Brook, ...		Leg and back lacerated.
	Jacob Yatscavitch, ..	Polish, ...	Laborer, ...	20	S.			Leg, back and scalp lacerated by fall of coal at face of robbing.
Dec. 23	John Chura, ...	Hungarian, .	Laborer, ...	40	M.	Beaver Brook, ...		Leg fractured by stick of timber rolling against it while unloading car of timber. Outside.

CONDITION OF COLLIERIES

G. B. MARKLE COMPANY

Jeddo No. 4 and Ebervale.—Ventilation, roads, drainage and condition as to safety, good.

Jeddo No. 7.—Ventilation, roads, drainage and condition as to safety, good.

Highland Nos. 2 and 5.—Ventilation, roads, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Hazleton No. 1, Hazleton Shaft, Spring Mountain and Spring Brook.—Ventilation, roads, drainage and condition as to safety, good.

COXE BROTHERS AND COMPANY, INCORPORATED

Drifton, Eckley and Buck Mountain, Deringer, Gowen and Tomhicken.—Ventilation, roads, drainage and condition as to safety, good.

PARDEE BROTHERS AND COMPANY, INCORPORATED

Lattimer.—Ventilation, roads, drainage and condition as to safety, good.

A. PARDEE AND COMPANY

Cranberry.—Ventilation and condition as to safety, good. Roads and drainage, fair.

C. M. DODSON AND COMPANY

Beaver Brook.—Ventilation and condition as to safety, good. Roads and drainage, fair.

HARWOOD COAL COMPANY

Harwood.—Ventilation and condition as to safety, good. Roads and drainage, fair.

UPPER LEHIGH COAL COMPANY

Upper Lehigh.—Ventilation, roads, drainage and condition as to safety, good.

J. S. WENTZ AND COMPANY

Hazle Brook.—Ventilation, roads and drainage, fair. Condition as to safety, good.

M. S. KEMMERER AND COMPANY

Sandy Run.—Ventilation, roads, drainage and condition as to safety, good.

HARLEIGH BROOKWOOD COAL COMPANY

Harleigh—Buck Mountain Slope.—Ventilation and condition as to safety, good. Roads and drainage, fair.

Spear Point Wharton Slope.—Ventilation, roads and drainage, fair. Condition as to safety, good.

Fish Tail Slope.—Ventilation, roads, drainage and condition as to safety, good.

HAZLE MOUNTAIN COAL COMPANY

Hazle Mountain.—Ventilation and condition as to safety, good. Roads and drainage, fair.

WOLF COAL COMPANY

Wolf.—Ventilation, roads, drainage and condition as to safety, good.

THOMAS R. REESE AND SON

Dusky Diamond.—Ventilation, roads, drainage and condition as to safety, good.

IMPROVEMENTS

G. B. MARKLE COMPANY

Jeddo No. 4 Colliery.—A rock tunnel was driven from the Mammoth to the Primrose vein, a distance of 170 feet, for the purpose of developing the Primrose vein in the vicinity of the main slope. Old fresh water reservoir was converted to the use of sulphur water, and a 10 by 18 by 10 inch duplex pump was installed to provide wash water for the East side of the breaker. A hammer crusher, elevator, shaker screens and two plunger jigs were installed to handle refuse from the breaker. A new substantial slush trough, 2,600 feet long, was made to carry crushed material to a bore hole for flushing old workings. A 4-inch water line, 520 feet long, was laid to Oakdale tank. A 3-inch water line, 325 feet long, was laid from Jeddo No. 4 4-inch line to new fire plug at Middletown village. Two

new blocks of houses for employes were built south of Japan. A 6-inch bore hole was drilled from the surface to the Buck Mountain vein, a distance of 188 feet, to drain the South local basin of the Wharton vein preliminary to stripping. Timbered subways were driven under the East slate bank for reloading purposes and used as reserves for bank material. Installed new steel cut gear and pinion and two new steel crank shaft pedestals on Jeddo No. 4 Washery hoisting engine. Two spirals were placed for Stove and Nut. Two Buckwheat spirals were placed on the East side. Broken, Egg, Stove and Nut roller coal shakers were equipped with cranks, driving rods and pedestals instead of eccentrics. Built an addition on West side of breaker and installed four Lehigh Valley jigs. Laid 2,500 feet of track to reclaim Black Jeddo culm bank. Installed a compressor at Shaft for blowing new artesian wells west of Stockton road. A sanitary washhouse for employes, with all modern facilities, was erected and put in service at the Shaft. The building is 20 by 40 feet, with provision for hanging clothes instead of putting them in unsanitary lockers. Village repairs were continued on a large scale, rebuilding employes' houses and grading roads.

Ebervale Colliery.—Seven steam shovels and fifteen locomotives are engaged in the work of stripping Mammoth vein at Ebervale No. 5. Ebervale No. 1 Mammoth stripping was completed, a total of 490,000 cubic yards of cover being removed. Moved and remodeled carpenter and blacksmith shops. Built a new combined colliery office, warehouse and hospital, 20 by 40 feet. Built a new sanitary wash house, 18 by 37 feet, with all modern conveniences. Four artesian wells, of an average depth of 500 feet, were put down on this property to relieve fresh water shortage.

Jeddo No. 7 Colliery.—A rock tunnel was driven from the Holmes vein to the Mammoth vein, a distance of 40 feet, to develop the Mammoth vein under the old stripping. A new slope was driven in the Wharton vein from the third lift to the surface. This slope will eventually replace Nos. 1 and 3 slopes. Six plunger jigs were put in operation in the breaker on the smaller sizes of coal. A 20-ton track scale was installed for weighing of Ebervale No. 5 stripping coal. Erected 1,200 feet of 3-inch steam line from Jeddo No. 7 boiler house to plane engine near No. 1 slope. Operations have been continued in the huge stripping over the old Harleigh Mammoth vein workings. Excavation of rock and other materials amounted to about 600,000 cubic yards. Four steam shovels and fifteen locomotives have been employed at this work.

Highland No. 5 Colliery.—A rock tunnel, 120 feet long, was driven from West gangway "A" of Plane "J," to the Gamma vein. Two rock holes were driven from No. 9 to No. 10 vein. A rock tunnel 80 feet long was driven from No. 8 to No. 9 vein, to develop the South basin in No. 9 vein. Seven air motors in operation at Highland No. 5 were sent to the Jeddo repair shop and rebuilt. Two rock holes were driven from the Buck Mountain to the Gamma vein, a distance of 80 feet, for the development of the Gamma vein. A 12 by 18 inch hoisting engine was placed at the head of slope "B," and the slope was driven 500 feet. This slope is for the development of coal in a local basin. A hoisting engine was set up at head of Tunnel "D" dip, to hoist cars out and relieve air motors

of the necessity of running down in dip. The breaker was practically rebuilt without interruption of operations and all new machinery installed throughout. Six plunger jigs were placed in the East side of the breaker. A set of 30 by 36 inch compound broken rolls were also installed; also a 2-deck steamboat and broken shaker. A modern combined office, warehouse and hospital, 18 by 74 feet, was erected and put in service. Replaced old Dodge chain on the boiler fuel conveyor with a 6-inch pitch Wilmot chain. The brick retaining wall on the north side of the boiler house was replaced by concrete. Two new blocks of houses for employes were built at Foundryville.

Highland No 2 Colliery.—Steel timber was put in the new central pump room and a concrete roof built. A 6 by 6 rock tunnel was driven 135 feet to drain a sump at foot of Slope "A." 1,800 feet of rock ditch made in Tunnel "I" from bottom of Slope "B" West gangway "A" to new sump. Three large pumps from various parts of the mines were moved into new central rock pump room and put in operation. These pumps are run condensing and handle all the water of the mine from this central point. Two 14-inch column lines and one 6-inch steam line were laid from central pump room to the surface. A water door was built in tunnel, outside of pump room, to be used in case of emergency. By closing this door the water can rise 80 feet vertically over a large area without interfering with the pumping plant. A rock slope, 320 feet long, was driven from the new bottom lift tunnel and connected to the No. 2 main slope on the first level. This is now the main hoisting slope, and coal is being hoisted from both levels. A 16 by 30 hoisting engine was erected and put in service on the new slope. Foundations for a new 1,500-tons capacity breaker were put in. The wooden framework of new breaker is about two-thirds completed and some machinery has been installed. The new breaker engine house is completed and two 14 by 30 inch Hamilton duplex Corliss engines and one Goyne duplex 12 by 23 by 14 by 36 pump were installed. A new 12 by 10 by 16 Worthington duplex fire pump was installed in new building 200 feet from breaker. Conveyor pit for No. 6 mine coal was completed and house built over same. A sanitary washhouse for the miners has been erected, to provide modern facilities for employes. The building is 20 by 40 feet by 20 feet high, with provisions for hanging clothes instead of putting them in unsanitary lockers. A modern combined office, warehouse and hospital building, 18 by 60 feet was erected and put in service. A double dwelling, with all modern conveniences, was built for Inside and Outside Foremen. 1,200 feet of 3-inch water line, and 1,200 feet of 2-inch air line were laid from Highland No. 1 hoisting engine to artesian well, for fresh water supply. Installed four Lehigh Valley jigs, one elevator and two spirals in old breaker. Built an addition to colliery shop, and installed a bolt cutter, pipe cutter and drill-press in same.

Highland No. 6 Slope: 2,000 feet of track laid in Tunnel "C" West gangway "A," and a tunnel driven to develop local basins south of main basin. A 35 H. P., 220-volt induction motor, and a 2,400 gallon centrifugal pump with necessary suction lines, were installed on the swampy surface at eastern end of property to drain all the

surface cave holes in this vicinity. Drilled an 8-inch bore hole, 500 feet deep, for artesian water. Built 24 by 24 foot addition to the boiler house and installed 12 by 12¼ by 12 Ingersoll-Rand air compressor in it for blowing artesian well.

LEHIGH VALLEY COAL COMPANY

Hazleton No. 1 Colliery.—A relief throttle was placed on the No. 8 slope engine. A cement floor was placed in the machine shop. An automatic unhitching device was installed in the stable to release the horses and mules in case of fire. A new silt line, together with the necessary engine house, trestling, etc., was built near Fager Ridge. Concrete piers were built under the breaker plane. Electric lights were placed in all buildings where necessary. A crane to facilitate the handling of cars was erected in the car shops.

Inside: A rock tunnel has been started from the 7th level West Wharton gangway in the Gamma vein. An electric pump was installed in the 3rd level West Wharton dip gangway. The old pump-room at the foot of No. 1 slope was filled with refuse from the mine. The timber on the turnout is being replaced with steel I beams. The old timber on the turnout at the bottom of the No. 8 slope is being replaced with steel supports. From the No. 6 stripping 180, 277 cubic yards of material were removed to uncover the coal.

Hazleton Shaft Colliery.—A locomotive house of hollow tile and steel was erected near the shaft engine house to replace the one at No. 5 slope, which was abandoned on account of stripping operations. A concrete floor was placed in the shaft engine house, and an iron fence placed around the hoisting engine as a means of preventing accidents. The rope drive on the silt line was replaced by a chain drive.

Inside. An electric pump was placed in the West Buck Mountain vein No. 5 slope in the dip gangway. A large concrete pillar was built at the top of empty car hoist at the shaft second level, which, together with the use of iron rails for collars, replaced all timber in this section. A telephone was installed between the 3rd level Buck Mountain slope and the hoisting engine house located on the surface. A rock tunnel was driven from the Wharton vein to the Mammoth vein North dip for stripping coal, and eventually to serve for the robbing of Mammoth vein. This tunnel will also eliminate buggy transportation in the stripping. A brick dam was built in the East Gamma gangway rock slope, east of the new pumping station, to be used for storing water during necessary pump repairs. A diamond drill hole, 3⅝ inches in diameter and 136 feet 6 inches in length, was bored from the tunnel at breast No. 68 East Buck Mountain 3rd level, to tap the water in the Stockton basin, which at this point was under a head of 300 feet. The water thus tapped is conducted through a tunnel at breast No. 38 to the Gamma vein, and thence to the rock slope pumping plant. The electric haulage system was extended in No. 7 Stockton into the South West Gamma gangway, to decrease the transportation cost and also to increase the production in this section.

Spring Mountain Colliery.—An electric apparatus for changing lighting system was installed, replacing the steam driven generators with a transformer so as to use Harwood Electric Company's power. A 6 inch water line from Roan reservoir was replaced by an 8 inch line, which delivers water direct to tanks located at the boiler house and does away with pumping. A new set of Lloyd rolls was installed in the breaker.

Inside: A rock hole was driven for ventilation from the East Lykens No. 3 counter gangway, boundary slope, to the Buck Mountain vein, for the purpose of changing the air course, due to the closing of the East Lykens gangway with a dam at boundary pillar between Spring Mountain and Spring Brook. The rock slope has been un-watered and gangways started in the Lykens vein. An electrically driven pump has been installed in the 6th lift of the boundary slope. A C. K. pump 20 by 12 by 24 inches, was placed in No. 7 slope for use in case of emergency. A concrete hospital was built near the bottom of the tender slope Buck Mountain vein, to replace the one on the west side of a slope which has been transformed into a Foreman's office. The extension of the Primrose slope was continued during the year and one counter has been started off from the slope. From the south stripping 117,972 cubic yards of material were removed during the year.

Spring Brook Colliery.—The old boiler house near the top of No. 1 slope has been torn down, and a new building has been erected over the fire pump. An iron fence was erected around the shaft rope hole. A diamond drill hole was bored from the Lykens vein to the Buck Mountain vein at the bottom of the rock slope in the No. 2 slope to syphon the water from the Buck Mountain dip gangway into the Lykens pump. The steam hoisting engine on the inside slope 2nd level of No. 2 slope was replaced by an electrically driven engine.

COXE BROTHERS AND COMPANY, INCORPORATED

Drifton Colliery.—A 36-inch circular swing saw with a timber drag has been installed in the timber yard to facilitate the cutting of timber for the mine. Three steam boilers were installed under the breaker to act as radiators in heating the breaker. The boiler house was equipped with new grate bars. A new water tank was erected at No. 1 slope. A rock tunnel and plane are being driven from the Northeast Wharton gangway, Drifton No. 1, to develop the Mammoth vein lying between Drifton No. 2 houses and Highland. This territory had previously been proven by diamond drill holes. A rock tunnel is being driven from the Buck Mountain vein east of top of No. 4 plane in Slope No. 2 south, to develop the Gamma vein. This tunnel when completed will be about 210 feet long.

Eckley Colliery.—A slope was driven up on the South dip from the basin of the Wharton vein to the No. 6 slope level. A pump was installed and the water pumped out of No. 1 slope workings, which had been submerged for a number of years. An engine has been installed and the reopening of the No. 1 slope workings commenced.

The old Clark pump at the bottom of No. 2 slope has been replaced with a 20 by 12 by 24 inch single Coxe-Knowles pump on a concrete foundation. The boiler house at No. 11 slope Buck Mountain was enlarged by the addition of one economic Erie boiler. A diamond drill hole, 2½ inches in diameter and 159 feet in length, on a pitch of 33 degrees, was bored from the West Buck Mountain gangway in No. 11 slope to the No. 12 stripping for the purpose of draining the water from stripping, thereby releasing a pump. There were removed from the different strippings at Eckley and Buck Mountain during the year 693,884 cubic yards of material.

Deringer Colliery.—The Deringer stripping was completed in April, 1914, and the plant removed to Gowen Nos. 1 and 3, where it was put to work stripping the cover from the south crop workings in July. All the timber supports in the No. 1 pumpway were removed and replaced with old iron rails. Concrete piers were built to support the column pipe. For a distance of 50 feet all the timber was removed from the mouth of the Creek Tunnel, and replaced with steel H beams supported by stone wall on each side, thus removing any danger of fire to mouth of tunnel. A 2-inch water pipe line, 2,750 feet long, was laid to supply water to the steam shovel engaged in loading coal at the Deringer stripping. A drum was installed for lowering the coal by gravity from the stripping to the mines for transportation underground to the tipple. During the year 11,243 cubic yards of material were removed from the Deringer strippings, and 86,174 cubic yards from Gowen south crop stripping.

PARDEE BROTHERS AND COMPANY, INCORPORATED

Lattimer Colliery.—A rock slope, 7 by 9 feet and 105 feet in length, has been driven on a pitch of 30 degrees from the Gamma vein to the stripping in line with No. 27 plane. A rock hole, 6 by 8 feet and 110 feet in length, has been driven from the top of the anticlinal in the Buck Mountain vein slope No. 8 to the Gamma vein in No. 3 tunnel basin. A rock hole, 6 by 6 feet and 45 feet in length, has been driven from the Gamma vein slope No. 12 to drain the water off the Mammoth vein gangway at the foot of Slope No. 5. A fireproof stable, 12 by 28 feet by 7½ feet, has been built in the top rock of the Gamma vein on the east side of Slope No. 9. A corrugated iron hospital building 12 by 16 feet, has been placed at the head of Slope No. 9, Slope No. 8 and Slope No. 27. A corrugated iron powder-house, 12 by 16 feet, and cap house 4 by 4 feet, has been erected west of Slope No. 9. A hollow tile wash-house, 14 by 30 by 9 feet high, equipped with steel lockers, hot and cold water, and shower baths, has been erected for the convenience of the men at Nos. 9, 11 and 12 slopes. An addition has been built to No. 4 breaker over the dry side for additional spirals, etc., for the proper handling of broken coal. A new conveyor line, 270 feet long, has been built on the north side of the canal opposite the store, to stock buckwheat coal. A new extension, 180 feet long, has been built to the Barley coal stock conveyor south of No. 4 breaker. A new conveyor line, 370 feet long, has been built west from No. 4 settling tank to deposit the culm on the south side of No. 4 loaded stand tracks. A new conveyor line, 135 feet long,

has been built south from No. 3 washery, to stock buckwheat and rice coal. A new conveyor line, 130 feet long, has been built from the No. 3 settling tank west, to convey the slate and culm to a pocket from which it is loaded into dump trucks and removed to Hollywood dump. A 17 by 24-inch stationary engine has been placed at the head of Slope No. 27 and an engine house built about the same.

Milnesville.—The North tunnel on the lower lift of the shaft has been extended 275 feet to the second split of the Alpha vein. A tunnel, 7 by 9 feet and 45 feet in length, has been driven from the Gamma to the Wharton vein on the lower lift of the shaft. A rock hole, 6 by 6 feet and 65 feet in length, has been driven from the Buck Mountain to the Gamma vein at the foot of Slope No. 26, which is now used as a muleway. The drainage tunnel has been extended 650 feet during the year. A fire-proof hospital, 10 by 12 by 7 feet, has been made in the top rock of the Buck Mountain vein near the foot of the shaft. A hospital building, 10 by 14 feet, has been erected on the surface at the head of the shaft. A corrugated iron washhouse, 14 by 18 feet, has been erected at the head of the shaft, equipped with steel lockers, hot and cold water, and stationary bath tubs, for the convenience of the men employed about the shaft. A corrugated iron smithshop and motor house has been erected at the head of the shaft. An emergency brake rigging has been placed on the electric hoist at the shaft.

C. M. DODSON AND COMPANY

Beaver Brook Colliery.—A tunnel 66 feet in length was driven from the North dip Buck Mountain vein to the North dip of the Lykens vein in the No. 16 slope, to facilitate transportation. A tunnel 54 feet in length was driven from the Lykens vein to the Buck Mountain vein, for transportation in No. 16 slope. No. 4 slope reopened and tunnel driven from Wharton to basin of Mammoth No. 20 slope in No. 11 slope was completed during the year. No. 18 slope in No. 5 slope was driven 1,275 feet during the year. A concrete hospital was built near bottom of No. 5 slope. The mule stables in Nos. 5 and 6 slopes were made fireproof during the year. A concrete hospital was built in No. 10 slope.

Outside.—A modern washhouse was erected near to the No. 11 slope. A locomotive track was built from the breaker to the mouth of No. 16 slope. A branch was put in from the main track to No. 5 to run into No. 4 slope reopened during the year. A new engine house has been erected at this slope. A new slush tank was installed in the breaker.

HARWOOD COAL COMPANY

Harwood Colliery.—Extensive repairs were made to the breaker.

Erected: A brick hospital, 12 by 14 feet; brick oil-house, 12 by 20 feet; brick garage, 13 by 32 feet; brick sand and coal house, 10 by 18 feet; 2 brick storage sheds, each 26 by 45 feet; asbestos protected metal locomotive house, 20 by 36 feet, and 2 corrugated iron hose-houses, 6 by 6 feet.

Laid 550 feet of 6-inch water line for fire protection.

The old boiler house was removed, and the colliery office enlarged.

Inside:—At Humboldt road slope, a brick hospital was erected 8 by 12 feet.

A rock slope was sunk from Wharton to Gamma vein, a distance of 75 feet.

A rock hole was driven from the Wharton vein up to the Parlor vein.

At Slope No. 5, the steam locomotive used inside was removed to the outside.

Several rock holes were driven from the Wharton to the Parlor vein for the purpose of robbing.

A rock plane was driven from No. 3 branch to No. 1 branch, a distance of 500 feet on 15 degrees.

The mule stable on No. 2 branch was enlarged to stable 19 mules.

A tunnel was driven in No. 1 branch, a distance of 100 feet, through an anticlinal to cut the Wharton in the No. 4 basin.

UPPER LEHIGH COAL COMPANY

Upper Lehigh Colliery.—Installed in breaker: Two Mt. Carmel B and K jigs for buckwheat coal; 24 inch conveyor line on South side of breaker to elevate material loaded from No. 2 slate banks to the top of breaker.

No. 2 Boiler Plant: Installed two 16 inch and one 24 inch Coppus turbo blowers. Laid 3 inch steam line to Water Works, distance 3,500 feet; and 4 inch steam line to No. 12 slope, distance 700 feet. Erected a new locomotive house north of breaker.

New slopes: No. 12 slope was sunk in No. 1 slope basin on through No. 1 vein or lowest vein underlying the Buck Mountain vein to level of water in Buck Mountain workings, and from it all the small underlying veins in No. 1 slope basin will be mined. Two gangways are being driven to the East and two to the West. A tunnel has been driven to the No. 2 vein from second counter level east of the slope, cutting vein at a distance of 79 feet. Another tunnel on the lower level has been driven from No. 1 vein to the Buck Mountain vein; both for the purpose of working No. 2 vein and to drain water from No. 12 slope workings into old Buck Mountain vein workings. Two Ingersoll-Rand back hammer drills and three Sullivan hand hammer drills have been installed; and gangways in this slope are being driven by these air hammer drills. A new Ingersoll-Rand, Imperial type, air compressor, 900 cubic feet, has been installed to furnish air for these drills, as well as for the air lifts in artesian wells.

No. 14 slope has been opened on the No. 2 vein, 1,050 feet east of No. 4 slope and in the No. 4 slope basin. Steam is being generated at this slope by two vertical boilers. The old air compressor has been installed at this slope and furnishes air for jack and hand hammer drills, which are also used in sinking this slope.

J. S. WENTZ AND COMPANY

Hazle Brook Colliery.—Slope No. 9: Water has been removed from No. 9 slope workings so that a gangway could be driven to the West

in No. 2 vein through the fault and the spoon-end of this basin developed. An air compressor, Ingersoll-Rand Imperial type, 900 cubic feet, has been installed at the top of the slope to furnish air for the drills.

Slope No. 10: This slope was opened to recover pillars lost in first robbing of No. 4 vein. The gangways have been driven as far as practicable and are now being robbed back.

Slope No. 15: This slope was sunk in spoon of No. 5 vein from West end of No. 6 stripping to recover pillars lost in robbing No. 5 vein, and was sunk for a distance of 525 feet. The slope is now being robbed back.

Slope No. 16: This slope was sunk to develop Western end of property in No. 2 vein and to recover pillars standing in these workings.

A heading, below the No. 6 gangway level, was driven to drain the water from No. 6 tunnel and west gangways. All coal west of No. 6 tunnel is mined from No. 16 slope. Gangways are being driven in the No. 2 vein by air drills.

Slope No. 1: The pumphouse in this slope was retimbered and made as safe as possible. A hospital was completed in this slope and fully equipped with basin, rubber and woolen blankets, chairs, stretchers, and First Aid Cabinet, etc.

Signal gongs connected with 2 inch pipe have been placed on the First and Bottom levels and connected with one placed in the slope engine house.

No. 2 vein gangway has been opened a distance of 600 feet (i. e. No. 2 east gangway).

In No. 1 vein the West gangway has been opened 100 feet, and the gangway on East side of same vein has been driven 400 feet.

In No. 3 vein a sub-slope has been driven on the West side 150 feet, and a gangway driven east from bottom of this sub-slope 200 feet.

Hospitals have been built and fully equipped in the various slopes.

In No. 5 slope the basin gangway has been reopened and retimbered a distance of 800 feet. This slope has also been equipped with signal gongs at the top of the slope, which are connected with the counter and basin levels.

No. 7 stripping counter gangway on North dip of No. 2 vein has been reopened and retimbered a distance of 1,700 feet. Thirty new batteries were installed in the breasts above this gangway to hold stripping rock from falling on gangway and to allow the working of the lower coal in these breasts.

In East end of No. 8 stripping a slope has been sunk on the South dip a distance of 200 feet. A similar slope was sunk in East end of No. 7 stripping a distance of 141 feet. Hoisting engines have been placed at the top of each of these two slopes and connected with No. 5 boiler plant by a steam line 1,200 feet in length from each engine.

A motor has been purchased for inside haulage, and a motor house constructed in the No. 2 vein counter gangway.

Outside: At No. 1 boiler plant, the two eastern sets of boilers have been equipped with new stacks.

At No. 5 boiler plant two old upright cylinder boilers have been torn out and scrapped, and the boiler house rebuilt.

A new pump house has been erected over the fresh water pump, and a tank placed on the North side of the pump, into which the water will be pumped by air and run from this tank to No. 1 boiler dam by gravity. A new water line of 4 inch pipe has been installed from this well to No. 1 boiler dam, a distance of 3,000 feet.

The locomotive house has been enlarged to accommodate an additional locomotive.

A new hose cart has been bought and 600 feet of 2 inch fire hose placed on it. Plugs have been installed in the breaker and so arranged that the breaker pump supplies them with water. Plugs have also been placed in the Eastern and Western ends of No. 1 boiler house and so arranged that the feed pumps supply them with water. The dwelling houses near railroad, can be reached by water from the plugs in Eastern end of boiler house. There is also a connection in the shop which is supplied with water from the boiler feed pumps. The fresh water line to the Southern dwellings has been so arranged that water can be pumped through from the No. 1 boilers, for fire protection. The hose cart is stored in a small house, conveniently located to reach any water plugs.

M. S. KEMMERER AND COMPANY

Sandy Run Colliery.—The old No. 8 slope on the Wharton vein was re-opened and a railroad 3,000 feet in length was built from breaker to slope. There was also an engine installed, and engine house erected.

A portion of the old No. 16 slope workings under the Township road was silted to prevent the road from caving.

On October 22, the engine house at the No. 5 slope was destroyed by fire. A new engine house has been erected on the old site.

The No. 5 slope was sunk a distance of 130 feet to the basin, and a gangway is being driven to the East.

A plane was erected at the No. 1 stripping, with tipple on the line of the Central Railroad of New Jersey. A gangway is being driven to reclaim some crop coal that was left by the underground robbing.

HARLEIGH BROOKWOOD COAL COMPANY

Harleigh Colliery.—Buck Mountain Slope: Erected new boiler house to replace one destroyed by fire August 15.

Installed one three-stage electrically driven pump, capacity 900 gallons per minute against 350 feet head, in Buck Mountain slope; also one two-stage electrically driven pump, capacity 1,000 gallons per minute, against 225 feet head, in Wharton vein. Both veins are now equipped with steam and electrically driven pumps, either of which has sufficient capacity to be used.

Installed 125 H. P. motor to drive hoisting engine at Buck Mountain slope, formerly driven by steam.

Installed one 30 H. P. motor to drive 16 foot Guibal ventilating fan formerly driven by steam.

Erected 14 by 30 sub-station for housing transformers, etc.

Abandoned separator and changed head tracks.

A tunnel 8 by 12 feet, known as No. 4, was driven from first level, Buck Mountain bed, a distance of 90 feet to connect with Gamma bed in basin.

Pillars in Buck Mountain bed drawn within 100 feet of Tunnel No. 4.

Gangway in second level, Buck Mountain bed driven 200 feet and road regraded a distance of 500 feet.

Gangways driven in Gamma bed, 350 feet east and 500 feet west of Tunnel No. 4.

Wharton gangways east and west of Tunnel No. 1 reopened and retimbered, and pillar drawn on West side to within 150 feet of Tunnel No. 1 and on East side to within 300 feet of Tunnel No. 1.

Dip gangway driven east in basin of Wharton bed a distance of 100 feet, and 15 H. P. electric hoist installed at top of dip.

Stables in first level enlarged and remodeled, and new concrete medical room built.

Spear Point Slope: Fourth level, Wharton gangway, driven 200 feet east.

Moved and remodeled electric hoist and installed additional emergency brake.

Excavated new channel for Big Black Creek across property, 200 feet south of former course, for the purpose of stripping outcrop of Mammoth and Wharton veins.

Removed 180,000 cubic yards of clay from North outcrop of Mammoth and Wharton veins. Wharton slope regraded and driven 50 feet north.

No. 3 stripping plane driven 150 feet south to boundary line. Erected new tipple for dumping coal into railroad cars. Installed one 100 H. P. electric hoist. Constructed 600 feet standard gauge track.

Fish Tail Slope: Basin gangway driven 600 feet west and new turnout made. Plane gangway, South side, driven 800 feet west.

Outside: Erected addition to carpenter shop, 12 by 24 feet.

Constructed 250 feet steam line from boiler house to breaker engine-house.

Erected locomotive house, 20 by 32 feet.

Installed one set re-breaking rolls, and one 10 by 12 locomotive for handling breaker refuse.

TWELFTH DISTRICT

SCHUYLKILL COUNTY

Mahanoy City, Pa., February 18, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Twelfth Anthracite District, for the year ending December 31, 1914.

Respectfully submitted,

P. C. FENTON, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	8
Number of mines,	16
Number of mines in operation,	16
Number of tons of coal shipped to market,	2,303,939
Number of tons used at mines for steam and heat,	394,619
Number of tons sold to local trade and used by employes,	43,446
Number of tons produced,	2,742,004
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	5,042
Number of persons employed outside,	2,008
Number of fatal accidents inside of mines,	17
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	16
Number of non-fatal accidents outside,	.....
Number of tons of coal produced per fatal accident inside,	161,294
Number of tons produced per fatal accident outside,	1,371,002
Number of tons produced per fatal accident inside and outside,	144,316
Number of persons employed per fatal accident inside,	297
Number of persons employed per fatal accident outside,	1,004
Number of persons employed per fatal accident inside and outside,	371
Number of persons employed per non-fatal accident inside,	315
Number of persons employed per non-fatal accident outside,	.....
Number of persons employed per non-fatal accident inside and outside,	441
Number of wives made widows,	6
Number of children made orphans,	11
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	20
Number of compressed air locomotives used inside,	15
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	14
Number of electric motors used outside,	2
Number of gasoline locomotives used inside,	.....
Number of fans in use,	16
Number of furnaces in use,	.....
Number of gaseous mines in operation,	16
Number of non-gaseous mines in operation,	.....
Number of new mines opened,	.....
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	2,179,787
Lehigh Valley Coal Company,	562,217
Total,	2,742,004

Production by Counties

Schuylkill,	2,742,004

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	14	1	15	16	.....	16	155,699	136,237	4,228	1,686	5,914	302	1,686	264	.....
Lehigh Valley Coal Co.,	3	1	4	.....	.....	.....	187,406	.....	814	322	1,136	271	322	.....	.....
Totals and averages,	17	2	19	16	.....	16	161,294	171,375	5,042	2,008	7,050	297	1,004	315	.....

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	1	....	....	....	....	2	....	....	....	3	17.64
Falls of roof,	....	....	....	....	....	....	....	1	....	....	....	....	1	5.88
Mine cars,	....	....	1	2	....	....	....	....	1	....	....	1	5	29.41
Explosions of gas,	....	....	....	....	....	2	....	....	....	....	....	....	2	11.77
Explosions of powder and dynamite,	....	....	....	....	....	....	1	....	....	....	....	....	1	5.88
Blasts, premature and otherwise,	....	....	....	....	....	1	....	....	1	....	....	....	2	11.77
Falling into slopes, etc.,	....	....	....	....	....	....	....	....	....	1	....	1	2	11.77
Rush of coal,	....	....	....	....	1	....	....	....	....	....	....	....	1	5.88
Totals,	....	....	1	3	1	3	1	1	4	1	....	2	17	100.00
Outside														
Machinery,	....	....	1	....	....	....	....	....	....	....	....	....	1	50.00
Struck by timber,	....	....	....	....	....	....	1	....	....	....	....	....	1	50.00
Totals,	....	....	1	....	....	....	1	....	....	....	....	....	2	100.00
Grand totals inside and outside,	....	....	2	3	1	3	2	1	4	1	....	2	19	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	2	....	....	....	1	....	....	1	1	....	5	31.25
Mine cars,	....	....	....	....	1	....	....	....	....	1	....	....	2	12.50
Explosions of gas,	....	....	....	1	....	....	....	....	2	....	....	....	3	18.75
Blasts, premature and otherwise,	....	....	....	1	....	....	1	....	1	....	2	....	5	31.25
Struck by prop,	....	....	1	....	....	....	....	....	....	....	....	....	1	6.25
Totals,	....	....	3	2	1	....	2	....	3	2	3	....	16	100.00
Outside (No accidents)														

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	....	....	2	....	3	1	....	2	1	....	1	10
Miners' laborers,	....	....	....	1	....	....	....	....	2	....	....	....	3
Drivers and runners,	....	....	1	....	....	....	....	....	....	....	....	....	1
Loaders,	....	....	....	....	1	....	....	....	....	....	....	....	1
Timbermen,	....	....	....	....	....	....	....	1	....	....	....	....	1
Starters,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	....	....	1	3	1	3	1	1	4	1	....	2	17
Outside													
Blacksmiths and carpenters,..	....	....	....	....	....	....	1	....	....	....	....	....	1
Ashmen,	....	....	1	....	....	....	....	....	....	....	....	....	1
Totals,	....	....	1	....	....	....	1	....	....	....	....	....	2
Grand totals inside and outside,	....	....	2	3	1	3	2	1	4	1	....	2	19

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	....	2	2	....	....	2	....	3	1	2	....	12
Miners' laborers,	....	....	1	....	1	....	....	....	....	....	1	....	3
Doorboys and helpers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	....	....	3	2	1	....	2	....	3	2	3	....	16
Outside (No accidents)													

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	1	1	....	....	1	....	....	....	....	....	3
Polish,	....	....	....	....	....	2	1	....	1	1	....	....	5
Slavonian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Lithuanian,	....	....	1	1	....	1	....	1	3	....	....	2	9
Greek,	....	....	....	....	1	....	....	....	....	....	....	....	1
Totals,	....	....	2	3	1	3	2	1	4	1	....	2	19

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Polish,	....	....	....	....	....	....	1	....	1	1	2	....	5
Slavonian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Lithuanian,	....	....	3	1	1	....	1	....	2	1	1	....	10
Totals,	....	....	3	2	1	....	2	....	3	2	3	....	16

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
Ellangowan Colliery:															
Ellangowan,	Slope,	Gaseous,	Fan,	20	6.6	6.0	80	1.4	Guibal,	Steam,	10	72,429	9,875	72,996	188
Ellangowan,	Shaft,	Gaseous,	Fan,	15	7.0	6.6	76	0.5	Guibal,	Steam,	7	79,854	7,475	80,295	285
Saint Nicholas Colliery:															
Saint Nicholas,	Slope,	Gaseous,	Fan,	21	7.0	6.6	90	2.3	Guibal,	Steam,	10	42,840	33,470	43,140	116
Suffolk Colliery:															
Suffolk,	Slope,	Gaseous,	Fan,	18	6.6	5.6	60	0.9	Guibal,	Steam,	3	28,327	12,438	28,481	33
Suffolk,	Slope,	Gaseous,	Fan,	18	6.6	5.6	60	1.1	Guibal,	Steam,	5	35,830	18,867	36,314	88
Maple Hill Colliery:															
Maple Hill,	Shaft,	Gaseous,	Fan,	21	7.0	6.6	75	1.8	Guibal,	Steam,	10	149,800	77,200	151,300	590
Maple Hill,	Shaft,	Gaseous,	Fan,	21	7.0	6.6	80	1.9	Guibal,	Steam,	10	54,060	27,050	54,980	227
Tunnel Ridge Colliery:															
Tunnel Ridge,	Slope,	Gaseous,	Fan,	21	7.0	6.3	85	2.0	Guibal,	Steam,	10	149,640	50,284	152,983	267
Mahanoy City Colliery:															
Mahanoy City,	Slope,	Gaseous,	Fan,	21	7.0	6.6	86	2.0	Guibal,	Steam,	10	75,310	20,185	77,745	95
Mahanoy City,	Slope,	Gaseous,	Fan,	12	3.5	3.0	80	.9	Guibal,	Steam,	3	18,045	4,435	18,490	17
North Mahanoy Colliery:															
North Mahanoy,	Slope,	Gaseous,	Fan,	21	7.6	6.3	80	1.1	Guibal,	Steam,	10	126,870	65,270	130,315	421

Lehigh Valley Coal Co.																	
Park Colliery:																	
Park,	Slope,	Gaseous,	Fan,	16	4.0	4.6	100	1.5	Gulbal,	Steam,	6	118,690	112,726	121,764	178
Park No. 1,				16	4.0	4.5	90	1.5			9	125,000	7,400	125,600	139
Park No. 2,	Slope,	Gaseous,	Fan,	14	4.0	4.0	90	1.3	Gulbal,	Steam,	6	33,900	5,199	33,500	75
Park No. 3,				16	5.4	4.5	85	1.5			10	93,350	28,900	108,000	96
Park No. 4,				12	3.5	3.0	120	1.5							

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co. Ellengowan, St. Nicholas, Suffolk, Maple Hill, Tunnel Ridge, Mahanoy City, North Mahanoy,	Schuylkill, ...	E. E. Kaercher, ...	Pottsville, ...	Reese Tasker, ...	Pottsville, ...	P. and R.
Lehigh Valley Coal Co. Park, Springdale Washery,	Schuylkill, ...	Thomas Thomas, ...	Wilkes-Barre, ...	Thomas R. Jones, ...	Mahanoy City, ...	Lehigh Valley

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.													
Ellangowan,	Schuylkill, ...	303,728	41,631	1,169	346,528	130	1,154	1	1	185,175	81,916	.....	71
St. Nicholas,		150,979	34,909	421	186,309	229	456	.....	4	5,175	33,545	23,375	42
Suffolk,		287,962	21,660	1,321	310,943	230	904	4	2	69,875	86,418	.....	69
Maple Hill,		463,124	67,015	.....	530,139	239	1,441	4	6	210,600	93,215	34,672	70
Tunnel Ridge,		137,855	58,806	194	196,855	246	658	4	1	38,475	67,856	14,087	61
Mahanoy City,		186,777	35,989	33,291	256,057	229	574	.....	.....	66,075	71,562	601	54
North Mahanoy,		303,846	44,847	4,263	352,956	227	724	2	2	72,350	.....	93,361	76
Totals,	.....	1,834,271	304,857	40,659	2,179,787	.....	5,914	15	16	647,725	434,512	166,096	443
Lehigh Valley Coal Co.													
Park,	Schuylkill, ...	414,191	89,762	2,787	506,740	226	1,106	4	.....	164,925	73,172	88,400	103
Springdale Washery,		55,477	.....	.....	55,477	104	30	.....	.....	.....	.....	.....	.....
Totals,	.....	469,668	89,762	2,787	562,217	.....	1,136	4	.....	164,925	73,172	88,400	103
Grand totals,	.....	2,303,939	394,619	43,446	2,742,004	.....	7,050	19	16	812,650	507,684	254,496	546

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	.....	.....	124	15,550	15,550	.....	16	15	11	249	34,506	21	44,222	9,505	2	13
Lehigh Valley Coal Co.,		.....	.....	29	6,550	6,550	.....	4	.....	5	84	11,688	12	17,500	8,500	1	2
Totals,	.....	.....	.....	153	22,100	22,100	.....	20	15	16	333	46,194	33	61,722	18,005	3	15

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside												Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside		Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co., ...	Schuylkill, ...	8	95	..	1,125	956	222	53	15	519	1,235	4,228		....	12	52	194	271	76	31	1,050	1,686	5,914
Lehigh Valley Coal Co.,..		3	27	..	324	225	55	9	11	19	141	814		1	3	18	68	....	7	4	221	322	1,136
Totals, ...	.....	11	122	..	1,449	1,181	277	62	26	538	1,376	5,042		1	15	70	262	271	83	35	1,271	2,008	7,050

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co., ... Lehigh Valley Coal Co., ...	Schuylkill, ...	20 14	16 12	18 13	23 23	24 23	17 25	15 17	16 18	21 24	19 25	21 21	19 21	229 238

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
March 5	George Goodavage, ...	Lithuanian,	Driver, ...	18	S.	....	....	Tunnel Ridge,	Schuylkill, .	Killed by being caught between top rail of car and gangway timber. He was making a flying shift of two timber cars on main haulage-way, when the front car jumped the track at frog.
21	Edward Wright, ...	American, ..	Ashman, ...	26	M.	1	1	North Mahanoy		Killed by being caught in machinery. He was working at the end of an ash scraper line about 200 feet from boiler plant. He attempted to oil the bearings of the shaft, which the pinion wheel was attached to, and his coat came in contact with the teeth in the wheel, pulling him in. Outside.
April 6	Thomas Rosser, ...	American, ..	Miner, ...	43	M.	1	2	Park, ...		Killed by being caught between car and rib. He was standing on main gangway at bottom of slant, when a trip came down and jumped the track.
14	John Karestes, ...	Slavonian, ..	Laborer, ...	59	M.	....	....	North Mahanoy		Killed by cars. He was employed as repairman and at the time of the accident was cleaning the turnout at foot of inside slope. The driver was shifting two cars, and Karestes instead of staying on high side of gangway attempted to cross between the cars, and was caught.
21	Joseph Shaneka, ...	Lithuanian,	Miner, ...	25	S.	....	....	Suffolk, ...		Killed by fall of coal. He had driven a chute in the pillar for the purpose of robbing it back, and was working about 40 feet from main gangway, drilling a hole, when a piece of top coal fell on him.
May 11	Fred. Goval, ...	Greek, ...	Loader, ...	21	S.	....	....	Park, ...		Killed by rush of coal. He was in the act of starting the check battery when the coal in the main battery gave way, coming down the pitch with such force that it displaced three props and a set of timber that constituted the check battery, and he was caught under the rush of coal and timber about 15 feet from main gangway.

TABLE 4—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
June 4	Joseph Tilvakitis, ...	Lithuanian,	Miner, ...	38	S.	....	....	Tunnel Ridge,	Schuylkill, ..	Killed by explosion of gas. They were timbering the return air course 30 feet from main gangway when an explosion occurred, caused by the gas coming in contact with a carbide lamp that was found near the victims. They were supposed to be working with locked safety lamps.
	Lew. Ruffus, ...	Polish,.....	Miner, ...	29	M.	1	1			
7	Stiney Werbiski, ...	Polish,.....	Miner, ...	24	S.	....	....	Maple Hill, ...		Killed by premature blast. He was driving a chute and was up the pitch 27 feet from gangway. He fired a blast and before he could reach a place of safety it went off.
July 7	James Sweeney, ...	American, ..	Carpenter helper.	22	S.	....	....	Park, ...		Killed by being struck by a plank. He was in the act of hoisting a post for the purpose of repairing a trestle near the breaker, when a piece of plank fell and struck him on the head. Outside.
29	Korton Wisneskie, ...	Polish,.....	Miner, ...	40	M.	1	3	Maple Hill, ...		Killed by explosion of powder. While filling a cartridge of powder in breast heading, 60 feet from main gangway, a spark from his lamp ignited the keg of powder.
Aug. 10	Lewis Pozopski, ...	Lithuanian,	Timberman, ...	24	S.	....	....	Suffolk, ...		Killed by fall of rock while reopening the main gangway. He was making room for a collar and was standing on a platform erected in the mine car.
Sept. 2	Charles Kusey, ...	Lithuanian,	Laborer, ...	48	M.	1	3	Park, ...		Killed by being caught between car and platform. He was driving a mule, pulling a loaded car from the face of gangway to the counter chute, and in passing breast No. 36 he was caught between car and platform. He was riding on high side bumper.

Sept.	16	Anthony Orloskie, ...	Lithuanian,	Miner, ...	28	S.	....	....	Maple Hill, ...		Killed by fall of coal. He was dressing down some loose coal along the high side of main gangway when a piece fell on him. At the time of the accident he was using a pick cutting through the bench of coal, when it snapped off without any warning.
	28	Joseph Dougel, ...	Lithuanian,	Laborer, ...	22	S.	....	....	Ellangowan, ...		Killed by fall of coal. He was loading a car in face of gangway when a fall of top coal occurred.
		John Shumski, ...	Polish,.....	Miner, ...	26	M.	1	1	Maple Hill, ...		Killed by blast while working at face of breast. The person in the breast inside fired a blast in pillar heading and it blew through. The victim was warned in time for him to reach a place of safety.
Oct.	5	Bryne Chudler, ...	Polish,.....	Miner, ...	26	S.	....	....	Suffolk, ...		Killed by falling down pitch. He was working at face of breast and in some unknown manner fell down the pitch. He was found in chute about 30 feet from gangway.
Dec.	1	Charles Labuta, ...	Lithuanian,	Starter, ...	29	S.	....	....	Suffolk, ...	Schuylkill, ..	Killed by car. He was about to run a trip down the plane and was stationed at the lever. There was an empty car attached to the rope at the foot of plane, also a loaded car attached at the head of plane, and the driver was coming out to the head of plane with four loaded cars, which he failed to stop by the aid of sprags, and they ran past the head blocks (which were left open through the neglect of the victim) and collided with the empty car at foot of plane. The impact caused the loaded car at the head of plane to fly back towards the drum, catching the victim.
	28	John Koris, ...	Lithuanian,	Miner, ...	23	S.	....	....	Tunnel Ridge,..		Killed by falling down chute when he lost his light. He and his butty were returning to work after being at bottom of slope looking for timber. His butty went into an abandoned portion of the bottom split gangway and called for Koris to come along. In the darkness Koris fell down a counter chute.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
March 5	George Keever, ...	Lithuanian,	Miner, ...	38	M.	Tunnel Ridge, ...		Back broken by fall of coal at face of breast.
25	Stiney Haunon, ...	Lithuanian,	Miner, ...	42	M.	Suffolk, ...		Leg fractured. Struck by prop at face of skip.
31	Frank Zubritski, ...	Lithuanian,	Laborer, ...	21	S.	Maple Hill, ...		Leg fractured by fall of coal at face of gangway.
April 17	Samuel Elkew, ...	Slavonian, ..	Miner, ...	28	M.	North Mahanoy, ...		Injured internally. Struck by flying pieces of coal from blast at face.
29	Adam Ocavage, ...	Lithuanian,	Miner, ...	30	S.	St. Nicholas, ...		Slightly burned by explosion of gas at face of breast.
May 12	Louis Klementovage,..	Lithuanian,	Laborer, ...	22	S.	Suffolk, ...		Squeezed about the hips by being caught between car and gangway timber.
July 20	Anthony Bernatavage,	Lithuanian,	Miner, ...	25	S.	North Mahanoy, ...		Back injured by fall of coal at face of breast.
29	Mike Choplick, ...	Polish,.....	Miner, ...	55	M.	Ellangowan, ...	Schuylkill, ..	Skull fractured. Struck by a piece of coal from an explosion of blast at check battery near gangway.
Sept. 3	Alex. Norsavage, ...	Lithuanian,	Miner, ...	35	M.	St. Nicholas, ...		Slightly injured about face by premature blast at face of breast.
15	William Yamalavage,	Lithuanian,	Miner, ...	25	M.	St. Nicholas, ...		Slightly burned by explosion of gas at face of breast.
	John Getofskey, ...	Polish,.....	Miner, ...	30	S.			
Oct. 8	Stany Mincavage, ...	Polish,.....	Doorboy, ...	17	S.	Maple Hill, ...		Leg fractured by car on gangway.
17	William Tarauka, ...	Lithuanian,	Miner, ...	27	S.	Maple Hill, ...		Skull fractured by fall of coal at face of breast.
Nov. 10	Joe Barcavage, ...	Polish,.....	Laborer, ...	30	M.	Maple Hill, ...		Face and eyes injured by premature blast at face of gangway.
	Mike Barcavage, ...	Polish,.....	Miner, ...	38	M.	Maple Hill, ...		Leg fractured by premature blast at face of gangway.
17	Fra. Zuriss, ...	Lithuanian,	Miner, ...	27	S.	Maple Hill, ...		Leg broken by fall of top coal at face of breast.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Ellangowan, Saint Nicholas, Suffolk, Maple Hill, Tunnel Ridge, Mahanoy City and North Mahanoy.—Ventilation, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Park.—Ventilation, drainage and condition as to safety, good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Suffolk Colliery.—Electric haulage was installed inside in No. 5 drift. A slope was driven in Primrose seam from surface to second level; total length 207 yards, in order that a portion of Ellangowan Primrose coal could be taken to Suffolk.

Outside: Electric haulage was installed outside for the purpose of hauling coal from drifts Nos. 4 and 5 and Primrose New slope.

An 85 H. P. electric hoist was installed in a corrugated iron building 24 feet 6 inches by 16 feet by 9 feet 6 inches.

Maple Hill Colliery.—A tunnel was driven from Skidmore to Seven Foot seam; total length 31 yards.

An airway was driven through rock, on 45 degree pitch, to surface, to be used as a main airway for the new 21 foot exhaust fan recently installed in a fireproof building.

Outside. Installed a 21 foot diameter exhaust fan, operated by a 16 by 30 inch left hand engine resting on concrete foundation, the building being of corrugated iron.

Tunnel Ridge Colliery.—A tunnel was driven from Seven Foot seam to Buck Mountain; total length 24⅔ yards.

A tunnel was driven from Skidmore seam to Buck Mountain; total length 48⅔ yards.

A tunnel was driven from Skidmore seam to Buck Mountain 3rd level, North dip; total distance 37⅓ yards.

A tunnel was driven from Seven Foot seam to Skidmore, 3rd level, North dip; total distance 21 yards.

Mahanoy City Colliery.—An underground slope was sunk in Primrose seam on 20 degrees across the pitch, a total length of 217 yards.

52 H. P. motor to operate slope was installed in a fireproof building.

A tunnel was driven from Primrose seam to Orchard 1st level South dip; total length 69 yards.

North Mahanoy Colliery.—A tunnel was driven from Seven Foot seam to Skidmore; total length 31⅔ yards.

LEHIGH VALLEY COAL COMPANY

Park Colliery.—Steel supports were placed at No. 1 slope.

A 20 by 11 by 18 inch duplex pump, and an 8 by 12 by 12 inch condenser were installed on the 3rd level in No. 1 slope.

Outside. Springdale Washery was put in operation May 8. The Springdale Shaft, which has been abandoned for some years, was reopened and concreted for a distance of 30 feet, and retimbered from top to bottom.

A 21 by 20 foot concrete tile house was built for the breaker fire pump, and a 14 by 9 by 18 inch duplex pump installed.

Extensive repairs were made to No. 4 engine house, making it fireproof.

The rope haulage engine house was rebuilt with tile, making it fireproof.

A 28 by 48 inch first motion Vulcan engine was installed in No. 2 slope. A water spray system or fire protection was installed in breaker. A rock slope was sunk and completed from surface to Skidmore seam, the sides and roof being re-enforced with concrete.

THIRTEENTH DISTRICT

SCHUYLKILL COUNTY

Shenandoah, Pa., March 1, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: In compliance with the Anthracite Mining Laws, I transmit herewith my annual report of the Thirteenth Anthracite District for the year ending December 31, 1914.

Respectfully submitted,

A. B. LAMB, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	15
Number of mines,	32
Number of mines in operation,	32
Number of tons of coal shipped to market,	2,481,353
Number of tons used at mines for steam and heat,	375,674
Number of tons sold to local trade and used by employes,	47,854
Number of tons produced,	2,914,881
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	4,666
Number of persons employed outside,	2,346
Number of fatal accidents inside of mines,	14
Number of fatal accidents outside,	10
Number of non-fatal accidents inside of mines,	31
Number of non-fatal accidents outside,	8
Number of tons of coal produced per fatal accident inside,	208,205
Number of tons produced per fatal accident outside,	291,488
Number of tons produced per fatal accident inside and outside,	121,453
Number of persons employed per fatal accident inside,	333
Number of persons employed per fatal accident outside,	235
Number of persons employed per fatal accident inside and outside,	292
Number of persons employed per non-fatal accident inside,	150
Number of persons employed per non-fatal accident outside,	293
Number of persons employed per non-fatal accident inside and outside,	.179
Number of wives made widows,	12
Number of children made orphans,	18
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	43
Number of compressed air locomotives used inside,	7
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	9
Number of electric motors used outside,	2
Number of fans in use,	28
Number of furnaces in use,	.....
Number of gaseous mines in operation,	22
Number of non-gaseous mines in operation,	10
Number of new mines opened,	.....
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,...	1,650,380
Susquehanna Coal Company, ...	328,998
Thomas Colliery Company, ...	319,863
Harleigh-Brookwood Coal Company, ...	247,399
Locust Mountain Coal Company, ...	152,572
Cambridge Coal Company, ...	100,572
H. H. Smith and Company, ...	83,203
Oxford Coal Company, ...	31,894
Total, ...	2,914,881

Production by Counties

Schuylkill, ...	2,914,881

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	9	5	14	14	4	18	183,364	117,884	3,211	1,332	4,543	356	266	229	333
Susquehanna Coal Co.,	.....	.....	.....	1	1	2	.....	328,998	379	215	594	.....	.....	379	215
Thomas Colliery Co.,	1	3	4	1	1	2	319,863	319,863	280	210	490	280	70	280	210
Harleigh-Brookwood Coal Co.,	4	.....	4	13	1	14	61,850	19,031	380	235	615	95	.....	29	235
Locust Mountain Coal Co.,	.....	2	2	2	.....	2	.....	76,286	402	144	546	.....	72	201	.....
Cambridge Coal Co.,	.....	.....	.....	.....	1	1	.....	.....	14	96	110	.....	.....	.....	96
Miscellaneous Companies.	.....	.....	.....	.....	.....	.....	.....	.....	.....	114	114	.....	.....	.....	.....
Totals and averages,	14	10	24	31	8	39	208,205	94,029	4,666	2,346	7,012	333	235	150	293

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	....	1	....	....	....	....	....	....	....	1	7.14
Falls of roof,	....	....	....	1	1	....	....	....	....	....	....	....	2	14.29
Mine cars,	....	1	....	....	....	....	....	....	....	....	....	....	1	7.14
Explosions of gas,	....	....	....	....	....	....	....	....	2	....	....	....	2	14.29
Suffocation by gas, etc.	....	....	....	....	....	....	....	....	1	....	....	....	1	7.14
Blasts, premature and otherwise,	....	....	....	....	....	....	....	....	....	2	1	....	3	21.43
Falling into slopes, etc.	....	....	....	....	....	1	1	....	....	....	....	....	2	14.29
Struck by timber	....	....	....	....	....	....	....	....	....	....	1	....	1	7.14
Struck by pulley,	....	....	....	....	....	....	....	....	....	....	....	1	1	7.14
Totals,	....	1	....	1	2	1	1	....	3	2	2	1	14	100.00
Outside														
Cars,	....	2	1	1	....	....	2	....	....	1	....	....	7	70.00
Machinery,	....	1	....	....	....	....	....	....	....	....	....	....	1	10.00
Slush bank caved in,	....	....	2	....	....	....	....	....	....	....	....	....	2	20.00
Totals,	....	3	3	1	....	....	2	....	....	1	....	....	10	100.00
Grand totals inside and outside,	....	4	3	2	2	1	3	....	3	3	2	1	24	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	1	....	....	1	....	....	....	....	2	4	12.90
Falls of slate,	....	....	....	....	....	1	....	....	....	....	....	....	1	3.23
Mine cars,	....	1	....	....	....	....	....	....	....	1	....	3	5	16.13
Explosions of gas,	....	....	....	....	....	....	....	....	1	2	....	5	8	25.80
Blasts, premature and otherwise,	1	....	....	1	....	1	....	1	....	3	....	....	6	19.35
Falling into slopes, etc.	....	....	....	....	....	....	1	1	....	....	....	....	2	6.45
Mules,	....	....	....	....	1	....	....	....	....	....	....	....	1	3.23
Struck by timber,	1	....	....	....	1	....	....	....	....	....	1	....	3	9.68
Coal rolled against him,	....	....	....	1	....	....	....	....	....	....	....	....	1	3.23
Totals,	2	1	....	3	2	2	2	2	1	5	1	10	31	100.00
Outside														
Cars,	....	....	....	....	....	....	....	....	1	....	....	....	1	12.50
Machinery,	1	....	....	....	....	.1	....	....	1	....	....	....	3	37.50
Struck by frozen material,	1	....	....	....	....	....	....	....	....	....	....	....	1	12.50
Struck by hook,	1	....	....	....	....	....	....	....	....	....	....	....	1	12.50
Struck by timber,	....	....	1	....	....	....	....	....	....	....	....	....	1	12.50
Fell off platform,	....	....	....	....	....	....	1	....	....	....	....	....	1	12.50
Totals,	3	....	1	....	....	1	1	....	2	....	....	....	8	100.00
Grand totals inside and outside,	5	1	1	3	2	3	3	2	3	5	1	10	39	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	....	....	1	1	....	1	....	2	1	2	....	8
Miners' laborers,	....	....	....	....	1	....	....	....	1	1	....	....	3
Drivers and runners,	....	1	....	....	....	....	....	....	....	....	....	....	1
Repairmen,	....	....	....	....	....	1	....	....	....	....	....	....	1
Bottommen,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	....	1	....	1	2	1	1	....	3	2	2	1	14
Outside													
Blacksmiths and carpenters,	....	1	....	....	....	....	....	....	....	....	....	....	1
Engineers and firemen,	....	....	....	....	....	....	1	....	....	1	....	....	2
Laborers,	....	1	2	1	....	....	1	....	....	....	....	....	5
Lampmen,	....	....	1	....	....	....	....	....	....	....	....	....	1
Bottommen,	....	1	....	....	....	....	....	....	....	....	....	....	1
Totals,	....	3	3	1	....	....	2	....	....	1	....	....	10
Grand totals inside and outside,	....	4	3	2	2	1	3	....	3	3	2	1	24

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2	....	....	1	....	2	2	2	1	4	1	5	20
Miners' laborers,	....	....	....	2	1	....	....	....	....	1	....	3	7
Doorboys and helpers,	....	....	....	....	1	....	....	....	....	....	....	....	1
Bottommen,	....	1	....	....	....	....	....	....	....	....	....	....	1
Chargemen,	....	....	....	....	....	....	....	....	....	....	....	1	1
Loader bosses,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	2	1	....	3	2	2	3	2	1	5	1	10	31
Outside													
Blacksmiths and carpenters,	1	....	....	....	....	....	....	....	....	....	....	....	1
Laborers,	1	....	1	....	....	....	1	....	....	....	....	....	3
Oilers,	....	....	....	....	....	1	....	....	1	....	....	....	2
Jig runners,	1	....	....	....	....	....	....	....	....	....	....	....	1
Platform bosses,	....	....	....	....	....	....	....	....	1	....	....	....	1
Totals,	3	....	1	....	....	1	1	....	2	....	....	....	8
Grand totals inside and outside,	5	1	1	3	2	3	3	2	3	5	1	10	39

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	2	1	....	....	1	....	....	....	1	1	....	6
English,	....	....	....	....	....	....	1	....	....	....	....	....	1
Welsh,	....	1	....	....	....	....	....	....	....	....	....	....	1
German,	....	....	1	....	....	....	....	....	....	....	....	....	1
Polish,	....	....	....	....	2	....	....	....	3	....	....	....	5
Hungarian,	....	....	....	....	....	....	....	....	....	....	....	1	1
Italian,	....	....	1	1	....	....	2	....	....	....	....	....	4
Lithuanian,	....	....	....	....	....	....	....	....	....	2	1	....	3
Austrian,	....	1	....	....	....	....	....	....	....	....	....	....	1
Assyrian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	....	4	3	2	2	1	3	....	3	3	2	1	24

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	2	....	1	....	....	1	....	2	2	....	....	....	8
Irish,	....	....	....	....	....	....	2	....	....	....	....	2	4
Polish,	2	....	....	1	....	....	....	....	1	....	....	4	8
Hungarian,	....	....	....	....	....	....	....	....	....	1	....	....	1
Slavonian,	....	1	....	....	....	....	....	....	....	....	....	....	1
Lithuanian,	1	....	....	2	2	....	1	....	....	4	1	2	13
Austrian,	....	....	....	....	....	....	....	....	....	....	....	1	1
Russian,	....	....	....	....	....	2	....	....	....	....	....	....	2
Greek,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	5	1	1	3	2	3	3	2	3	5	1	10	39

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.																
West Shenandoah Colliery:																
West Shenandoah, ...	Slope, ...	Gaseous, ..	2 Fans, ...	18 21	6.6 7.	6. 6.	70 90	1. 3.	Guibal, ..	Steam, ...	..	14	114,248	77,761	125,346	579
Kohinoor Colliery:																
Kohinoor, ...	Shaft, ...	Gaseous, ..	Fan, ...	18	6.	4.5	75	1.4	Guibal, ..	Steam, ...	..	8	53,825	43,475	59,604	140
Turkey Run Colliery:																
Turkey Run, ...	Drift, ...	Gaseous, ..	Fan, ...	21	7.	4.5	90	3.	Guibal, ..	Steam, ...	..	17	71,410	35,945	97,030	
Turkey Run No. 5, ...	Slope, ...	Gaseous, ..	Fan, ...													
Turkey Run No. 8, ...	Slope, ...	Gaseous, ..	Fan, ...	8	.....	.....	180	.8	Guibal, ..	Electricity,	..	8	44,760	21,870	45,900	431
Turkey Run No. 2, ...	Drift, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	1	4,600	3,540	4,800	
Shenandoah City Colliery:																
Shenandoah City, ...	Shaft, ...	Gaseous, ..	Fan, ...	21	7.	.....	80	2.	Guibal, ..	Steam, ...	..	15	171,364	117,926	173,182	578
Shenandoah City, ...	Drift, ...	Gaseous, ..	Fan, ...	12	4.	.....	30	2.	Guibal, ..	Steam, ...	..	1	8,950	5,740	8,990	
Draper Colliery:																
Draper, ...	Shaft, ...	Gaseous, ..	2 Fans, ...	18 12	6.6 6.6	6. 6.	80 150	1.6 1.6	Guibal, ..	Steam, ...	..	10	112,960	97,130	118,675	383
Boston Run Colliery:																
Boston Run, ...	Slope.	Gaseous, ..	Fan, ...	21	7.	6.5	86	1.8	Guibal, ..	Steam, ...	..	9	52 630	36.080	54,440	249

Gilberton Colliery:																
Gilberton No. 1, Main,	Slope,	Gaseous,	2 Fans,	21	7.	6.	75	1.9	Guibal,	Steam,	10	158,000	106,128	168,250		
Gilberton No. 1, Skidmore,	Slope,	Gaseous,	Natural,	.....	.....	.....	.....	.....	.....	.....	2	5,100	4,500	5,350		
Gilberton No. 2, Skidmore,	Slope,	Gaseous,	Fan,	5	2.6	1.8	60	.....	Guibal,	Steam,	2	4,500	4,200	4,690	455	
Gilberton No. 3, Skidmore,	Slope,	Gaseous,	Natural,	.....	.....	.....	.....	.....	.....	.....	2	9,000	8,050	9,300		
Gilberton No. 4, Furnace,	Slope,	Gaseous,	Natural,	.....	.....	.....	.....	.....	.....	.....	2	10,200	8,525	11,200		
Indian Ridge Colliery:																
Indian Ridge,	Shaft,	Gaseous,	2 Fans,	15 18	6. 6.	4.5 4.5	80 75	1. 1.1	Guibal,	Steam,	7	121,330	61,773	124,095		
Indian Ridge No. 7,	Slope,	Non-gas.,	Fan,	12	4.	4.	65	.2	Guibal,	Steam,	3	18,225	8,225	18,815	360	
Indian Ridge, Holmes,	Slope,	Non-gas.,	Fan,	12	4.	4.	60	.2	Guibal,	Steam,	1	18,000	*	*		
Knickerbocker Colliery:																
Knickerbocker,	Slope,	Gaseous,	2 Fans,	12 18	4. 6.6	4. 6.	94 94	1.8 1.8	Guibal,	Steam,	9	65,930	65,930	66,327	336	
Susquehanna Coal Co.																
William Penn Colliery:																
William Penn,	Shaft,	Gaseous,	2 Fans,	18	6.	5.	55	1.6			4	40,620	28,260	55,750		
William Penn No. 1,	Drift,	Non-gas.,	Fan,	18	6.	5.	85	2.5	Guibal,	Steam,	5	81,700	55,000	84,260	379	
William Penn No. 2,	Drift,	Non-gas.,	Fan,	18	6.	5.	24	.8			3	30,100	22,340	38,060		
Thomas Colliery Co.																
Kehley Run Colliery:																
Kehley Run No. 1,	Slope,	Gaseous,	Fan,	16	6.	5.	90	1.5	Guibal,	Steam,	10	84,270	66,545	84,820	280	
Kehley Run No. 3,	Slope,	Non-gas.,	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....		
Kehley Run No. 4,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	4,050	3,145	*		
Harleigh-Brookwood Coal Co.																
Stanton Colliery:																
Stanton, Main,	Slope,	Gaseous,	Fan,	16	4.	4.8	85	2.	Guibal,	Steam,	3	31,000	8,500	33,425	152	
Stanton No. 2,	Slope,	Gaseous,	Fan,	15	4.	4.8	65	1.	Guibal,	Steam,	2	30,100	7,250	40,600	77	
Stanton, Four Foot,	Slope,	Gaseous,	Fan,	15	4.	3.9	80	1.2	Jeffrey,	Steam,	2	39,000	9,010	42,560	83	
Lawrence Colliery:																
Lawrence,	Slope,	Gaseous,	Fan,	8	4.	3.	100	.3	Sirocco,	Steam,	2	25,000	17,200	25,630	68	
Locust Mountain Coal Co.																
Weston Colliery:																
Weston, Water Level,	Tunnel	Non-gas.,	Fan,	5	2.6	1.8	800	.4	Stine,	Electricity,	2	40,000	32,540	41,260	402	
Cambridge Coal Co.																
Cambridge Colliery:																
Cambridge No. 1,	Drift,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1	4,050	3,500	4,160	14	
Cambridge No. 2,	Drift,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	1					

*Robbing

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
West Shenandoah,		E. E. Kaercher,				
Kohinoor,		E. E. Kaercher,				
Turkey Run,		E. E. Kaercher,				
Shenandoah City,		E. E. Kaercher,				
Draper,	Schuylkill, ...	G. B. Hadesty, ...	Pottsville, ...	Reese Tasker, ...	Pottsville, ...	P. and R.
Boston Run,		E. E. Kaercher,				
Gilberton,		G. B. Hadesty, ...				
Indian Ridge,		E. E. Kaercher,				
Knickerbocker,		E. E. Kaercher,				
Susquehanna Coal Co.						
William Penn, ...	Schuylkill, ...	Robert A. Quin, ...	Wilkes-Barre, ...	Edward A. VanHorn,	Shaft, ...	Pennsylvania
Thomas Colliery Co.						
Kehley Run, ...	Schuylkill, ...	Frank A. Hill, ...	Pottsville, ...	John Price, ...	Shenandoah, ...	P. and R.
Harleigh-Brookwood Coal Co.						
Stanton, ...	Schuylkill, ...	Frank A. Hill, ...	Pottsville, ...	John Price, ...	Shenandoah, ...	P. and R.
Lawrence, ...						P. and R. and Penna.
Locust Mountain Coal Co.						
Weston, ...	Schuylkill, ...	T. M. Dodson, ...	Shenandoah, ...	B. H. Stockett, ...	Shenandoah, ...	L. V. and Penna.
Cambridge Coal Co.						
Cambridge, ...	Schuylkill, ...	David R. James, ...	Shenandoah, ...	David R. James, ...	Shenandoah, ...	P. and R.
H. H. Smith and Co.						
Hudson Washery, ...	Schuylkill, ...	Godfrey Laudeman, .	Pottsville, ...	Godfrey Laudeman, .	Pottsville, ...	P. and R.
Oxford Coal Co.						
Oxford Washery, ...	Schuylkill, ...	Frank A. Hill, ...	Pottsville, ...	F. L. Klock, ...	Shenandoah, ...	P. and R.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.													
West Shenandoah,	Schuylkill,	392,913	64,638	16	457,567	230	516	2	1	16,225	17,877	9,862	30
Kohinoor,		.....	3,427	.....	3,427	230	176	.....	.....	24,050	16,583	.....	19
Turkey Run,		.....	.....	.....	.....	230	538	.....	7	29,400	41,075	.....	46
Shenandoah City,		205,948	43,570	43,268	292,786	226	814	4	6	33,400	35,832	25,809	66
Draper,		189,658	27,666	.....	217,324	223	550	1	2	150	110,336	25	34
Boston Run,		148,754	41,814	.....	190,568	227	359	3	.....	1,650	92,996	.....	18
Gilberton,		130,249	47,656	6,241	184,146	226	730	4	.....	3,900	100,764	16,825	53
Indian Ridge,		140,424	18,620	.....	159,044	226	438	.....	2	40,500	39,591	.....	57
Knickerbocker,		125,643	19,875	.....	145,518	230	422	.....	.....	3,100	23,925	34,217	44
Totals,		1,333,589	267,266	49,525	1,650,380	.....	4,543	14	18	152,375	478,979	86,738	367
Susquehanna Coal Co.													
William Penn,	Schuylkill,	289,700	36,596	2,702	328,998	255	594	.....	2	18,725	93,837	.....	61
Thomas Colliery Co.													
Kehley Run,	Schuylkill,	295,995	18,900	4,968	319,863	279	490	4	2	81,250	51,419	.....	38
Harleigh - Brookwood Coal Co.													
Stanton,	Schuylkill,	206,970	39,417	74	246,461	272	434	3	11	.....	169,115	500	39
Lawrence,		938	.....	.....	938	*	181	1	3	.....	24,160	.....	3
Totals,		207,908	39,417	74	247,399	.....	615	4	14	.....	293,275	500	42

*Coal prepared at Stanton Colliery.

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Locust Mountain Coal Co.													
Weston,	Schuylkill,	149,200	3,371	1	152,572	166	546	2	2	231,300	283,260	.....	.....
Cambridge Coal Co.													
Cambridge,	Schuylkill,	95,077	4,912	583	100,572	294	110	.....	1	756	1,100	1,850	5
H. H. Smith and Co.													
Hudson Washery,	Schuylkill,	80,121	3,082	.....	83,203	197	41	.....	.....	.....	.....	.....	.....
Oxford Coal Co.													
Oxford Washery,	Schuylkill,	29,763	2,130	1	31,894	88	73	.....	.....	.....	2,075	.....	1
Grand totals,		2,481,353	375,674	57,854	2,914,881	.....	7,012	24	39	484,400	1,203,945	89,088	514

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.	Schuylkill,	.....	.....	117	14,950	14,950	.....	18	7	9	239	30,502	21	31,411	8,104	4	10
Susquehanna Coal Co.,		.....	.....	15	2,300	2,300	.....	1	.....	.....	21	1,620	1	1,300	527	.....	1
Thomas Colliery Co.,		.....	.....	13	1,950	1,950	.....	4	.....	.....	13	1,213	4	5,000	4,000	.....	1
Harleigh-Brookwood Coal Co.,		.....	.....	6	2,100	2,100	.....	3	.....	.....	12	2,750	3	3,800	1,465	.....	5
Locust Mountain Coal Co.,		.....	.....	5	330	330	.....	11	.....	2	11	550	2	1,000	2,000	.....	2
Cambridge Coal Co.,		.....	.....	4	500	500	.....	1	.....	.....	7	300	.....	.....	.....	.....	.....
H. H. Smith and Co.,		.....	.....	4	500	500	.....	.....	.....	.....	7	244	.....	.....	.....	.....	.....
Oxford Coal Co.,		.....	.....	4	500	500	.....	5	.....	.....	5	375	.....	.....	.....	.....	.....
Totals,	.....	.....	.....	168	23,130	23,130	.....	43	7	11	315	37,554	31	42,511	16,096	4	19

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	(Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.	Schuylkill, ...	8	80	...	793	876	134	23	19	275	1,003	3,211	....	12	51	214	143	67	26	819	1,332	4,543
Susquehanna Coal Co.,		1	1	11	127	80	36	2	7	9	105	379	1	1	28	26	31	7	7	114	215	594
Thomas Colliery Co.,		1	1	5	116	80	13	6	4	54	.....	280	1	1	8	23	42	11	4	120	210	490
Harleigh - Brookwood Coal Co.		2	1	4	191	100	20	....	14	15	33	380	1	2	26	25	23	7	3	148	235	615
Locust Mountain Coal Co.		1	1	....	97	77	....	1	....	14	211	402	1	2	22	5	26	5	5	78	144	546
Cambridge Coal Co.,		1	....	1	5	5	1	....	....	1	.....	14	1	1	3	10	25	1	2	53	96	110
H. H. Smith and Co.,		....	....	....	.....	.....	....	....	....	....	.....	.....	1	1	4	7	2	1	1	24	41	41
Oxford Coal Co., ...		....	....	....	.....	.....	....	....	....	....	.....	.....	1	1	3	13	8	5	1	41	73	73
Totals, ...		14	84	21	1,329	1,218	204	32	44	368	1,352	4,666	7	21	145	323	300	104	49	1,397	2,346	7,012

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	20	16	18	23	23	17	14	15	21	20	21	19	227
Susquehanna Coal Co.,		20	18	22	22	23	20	20	22	22	22	22	22	255
Thomas Colliery Co.,		26	24	23	23	24	20	23	24	24	24	23	21	279
Harleigh-Brookwood Coal Co.,		24	24	25	25	24	25	23	23	5	26	23	25	272
Locust Mountain Coal Co.,		.....	.....	.....	14	14	4	18	18	24	26	23	25	166
Cambridge Coal Co.,		26	24	23	25	22	25	26	25	25	26	23	24	294

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Feb. 10	Joseph Irvin, ...	American, ..	B o t t om-man.	20	S.	...	....	Draper, ...	Schuylkill, ..	Killed by cars. Two cars ran into bottom of car hoist. The first car ran up hoist and the bumpers of second car mounted the bumpers of first car. Irvin touched the button to stop the machinery, but instead of waiting until the car hoist had stopped, he reached in between the cars to uncouple them, and his head was crushed between the top of the cars. Outside.
14	Harry Morgan, ...	Welsh, ...	Driver, ...	21	S.	....	....	Stanton, ...		Killed by cars on gangway. He was standing on the front end of a moving car, and reached forward to touch the mule with a sprag. His cap was falling from his head, and he tried to catch it with the hand that he was holding on with, and fell under the cars.
19	Roy Hess, ...	American, ..	Carpenter,	28	M.	1	1	West Shenandoah,		Instantly killed by car. He was working in the tip house. When the whistle blew for dinner, he started across the tracks, while looking at his watch, and did not see a loaded car approaching, and was struck by car. Outside.
26	Harry Pollock, ...	Austrian, ...	Laborer, ..	44	M.	1	....	West Shenandoah,		Killed while assisting in putting a chain on spur wheel at top of scraper line. He was standing on a log between the spur and the rope wheel, when the machinery started, and he slipped and fell between the spur and the rope wheel. Outside.
March 18	Louis Yost, ...	German, ...	Lampman,	66	M.	1	....	Boston Run, ...		Killed by being struck by descending car while walking up timber plane. Outside.

March	20	George Isgate, ...	American, ..	Laborer, ..	53	M.	1	4	Kehley Run, ...		Killed when slush bank caved in. They were in shanty on the slush bank. A chute was being driven from an old gangway that had been closed 40 years ago, and there was an empty breast adjoining the chute that was being driven that no one knew anything about. The blasting in the chute disturbed the old breast and it ran to the surface drawing down the shanty. Outside.
		John Decrease, ...	Italian, ...	Laborer, ..	18	S.	....	....			
April	8	Bryan Russ, ...	Assyrian, ..	Laborer, ..	23	M.	1	4	Weston, ...		Killed by car. A car was being hoisted up a car hoist and he moved to a place that he thought was safe the endless chain broke, the car took a peculiar course and struck him. Outside.
	11	Lawrance Tarquin, ..	Italian, ...	Miner, ...	38	M.	1	....	Boston Run, ...		Killed by fall of coal at face of gangway. He crawled under some bad top to trim down loose coal and the top fell on him.
May	12	Stiney Yepcavage, ..	Polish, ...	Laborer, ..	25	S.	....	....	Shenandoah City,		Killed by fall of rock near face while making room to stand a prop.
	26	Frank Molonskie, ...	Polish, ...	Miner, ...	23	M.	1	....	Shenandoah City,		Killed by fall of coal from face while picking near face of chute.
June	8	Lester Wonn, ...	American, ..	Repairman,	25	M.	1	....	Stanton, ...		Fatally injured by falling down slope 100 feet, while making repairs on slope dipping 60 degrees. Died July 2.
July	15	Tony Ross, ...	Italian, ...	Laborer ..	19	S.	....	....	Kehley Run, ...		Killed by falling under engine. He was riding on locomotive and in attempting to get off he fell under engine. Outside.
	28	Frank Phillips, ...	Italian, ...	Miner, ...	26	M.	1	2	Lawrence, ...	Schuylkill, ..	Killed by falling down manway.
	29	Uriah Calf, ...	English, ...	Fireman, .	65	M.	....	....	Gilberton, ...		Killed by being struck by descending car while walking down timber plane. Outside.
Sept.	18	Adam Wiluskie, ...	Polish, ...	Miner, ...	25	S.	....	....	Boston Run, ...		Smothered. He neglected to sprag a leg in the face of a heading and stand other timber each side to make the place secure and the leg pushed out and caught him covering him with fine coal.
	30	Frank Pindore, ...	Polish, ...	Laborer, ..	26	M.	1	....	Shenandoah City, .		Fatally burned by gas. Gas had accumulated in face of gangway and the two miners attempted to fire a shot without removing the gas. When they ignited the fuse the gas exploded, and burned the two miners and the laborer. Pindore died October 3 and Zinturick October 8. The other miner was not fatally burned.
		John Zinturick, ...	Polish, ...	Miner, ...	20	S.	....	....			
Oct.	13	Edward Smith, ...	American, ..	Engineer, .	35	S.	....	....	Weston, ...		Killed by locomotive. He attempted to clean his fire while his locomotive was running and lost his balance and fell in front of it. Outside.
	23	William Berwick, ..	Lithuanian,	Miner, ...	25	S.	....	....	Gilberton, ...		Killed by blast. They were driving a rock chute on the night shift. At eight o'clock they fired six shots, and at eleven o'clock the night boss found them under the rock dead. It is supposed they attempted to light all the shots at one time and before they left the face they started to explode.
		Benjaman Tomashonus.	Lithuanian,	Laborer, ..	30	S.	....	....			

TABLE 4—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Nov. 20	Peter Moorconus, ...	Lithuanian,	Miner, ...	46	M.	1	6	Gilberton, ...	Schuylkill, ..	Killed by being struck by timber, away from face. In removing an old set of timber he had chopped out the high side leg and was trying to bar down the collar, when it suddenly fell on him.
27	Benjamin Howard, ..	American, ..	Miner, ...	40	S.	....	....	Kehley Run, ...		Killed by blast. He was firing a shot with squib and shortened the match, and the shot went off before he reached a place of safety.
Dec. 27	Metro Bronco, ...	Hungarian,	Bottom-man	24	M.	1	1	Stanton, ...		Fatally injured by being struck by pulley. The night boss told Bronco to go up the slope and fix a loose pulley. When Bronco was on his way up the slope the pulley fell down and struck him. The slope is on a heavy pitch. Died in hospital.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 6	Joseph Cosluskie, ...	Polish, ...	Miner, ...	65	M.	Turkey Run, ...	Schuylkill, ..	Leg fractured. Collar fell on him.
9	Edward Brennan, ...	American, ..	Jig runnr, ...	16	S.	Cambridge, ...		Big toe amputated. Caught in machinery. Outside.
14	Elmer Baskerfield, ..	American, ..	Carpenter, ...	23	S.	Wm. Penn, ...		Wrist broken. Hook broke on dirt plane. Outside.
22	Michael Blazuskie, ..	Polish, ...	Laborer, ...	48	M.	Turkey Run, ...		Pelvic bone fractured by being struck by falling frozen material. Outside.
26	Thomas Consavage, ..	Lithuanian,	Miner, ...	49	M.	Indian Ridge, ...		Thigh fractured. Struck by flying coal from shot.
Feb. 4	Andrew Latwisher, ..	Slavonian, .	Bottomman, ...	27	M.	Stanton, ...		Leg fractured. Clothes caught by passing gun-boat.
March 26	George Cox, ...	American, ..	Laborer, ...	22	S.	Turkey Run, ...		Leg fractured. Log rolled on him on timber bank. Outside.
April 4	Ben. Churuskie, ...	Lithuanian,	Laborer, ...	28	S.	Stanton, ...		Leg fractured by fall of coal near face.
21	Joseph Kushinskie, ..	Polish, ...	Laborer, ...	33	M.	Turkey Run, ...		Foot lacerated. Coal rolled against him near face.
27	Joseph Keravage, ...	Lithuanian,	Miner, ...	30	S.	Kehley Run, ...		Thigh broken by premature blast.
May 9	John Sorasavage, ...	Lithuanian,	Laborer, ...	36	S.	Shenandoah City,		Leg broken. A prop fell on him.
29	Peter Gober, ...	Lithuanian,	Doorboy, ...	16	S.	Indian Ridge, ...		Head injured. Kicked by mule.
June 15	Robert Grafton, ...	American, ..	Oiler, ...	30	M.	Stanton, ...		Leg broken. Caught in machinery. Outside.
25	John Sucofsky, ...	Russian, ...	Miner, ...	23	S.	Turkey Run, ...		Head, face, back and leg lacerated by delayed shot.
29	Benjaman Masolsky,	Russian, ...	Miner, ...	38	M.	Wm. Penn, ...		Leg fractured by fall of slate near face.
July 7	Enock Bernitus, ...	Lithuanian,	Miner, ...	36	S.	Shenandoah City,		Head and chest crushed by fall of coal near face.
23	Thomas Scanlon, ...	Irish, ...	Laborer, ...	62	M.	Shenandoah City,		Hip fractured. Fell from platform. Outside.
28	John Kenedy, ...	Irish, ...	Miner, ...	30	M.	Lawrence, ...		Scalp lacerated. Fell down manway.
Aug. 11	Winfield Zerby, ...	American, ..	Miner, ...	32	M.	Turkey Run, ...		Face and eyes lacerated by premature blast.
17	George Winlock, ...	American, ..	Miner, ...	51	M.	Turkey Run, ...		Head and face lacerated. Fell down chute.
Sept. 26	Gerald Foley, ...	American, ..	Oiler, ...	19	S.	West Shenandoah,		Back and shoulder bruised. Caught by rope wheel. Outside.
28	Frank Knoll, ...	American, ..	Platform boss, ...	52	M.	Kehley Run, ...		Pelvic bone broken. Crushed between timber and cars. Outside.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Sept. 30	Walter Motcholskie, ..	Polish, ...	Miner, ...	40	M.	Shenandoah City,	Schuylkill, ..	Face and hands burned by gas.
Oct. 6	John Maschalick, ...	Hungarian,	Laborer, ...	30	M.	Stanton, ...		Leg broken. Side of buggie fell on him.
15	Joseph Close, ...	Lithuanian,	Miner, ...	38	M.	Weston, ...		Leg and shoulder broken by premature blast.
	Sylvester Nydock, ..	Lithuanian,	Miner, ...	32	S.	Weston, ...		Face lacerated by premature blast.
26	Charles Buljunus, ...	Lithuanian,	Miner, ...	25	S.	Lawrence, ...		Face and hands burned by gas.
	Anthony Tomachumus,	Lithuanian,	Miner, ...	29	M.	Lawrence, ...		Face and hands burned by gas.
Nov. 17	Peter Grabowski, ...	Lithuanian,	Miner, ...	24	S.	Stanton, ...		Skull fractured. Struck by piece of wood on slope.
Dec. 7	Peter Langton, ...	Irish, ...	Laborer, ...	38	M.	Shenandoah City,		Head, face and arm lacerated. Crushed under car.
16	Isedore Bouser, ...	Lithuanian,	Miner, ...	45	M.	Stanton, ...		Face and hands burned by gas.
17	Thomas Kovalskie, ..	Polish, ...	Laborer, ...	20	M.	Stanton, ...		Thigh and knee fractured. Bumped between cars.
18	Thomas Cusmer, ...	Polish, ...	Miner, ...	34	M.	Shenandoah City,		Head and knee bruised by fall of coal.
19	Ralph Macklofski, ..	Polish, ...	Laborer, ...	26	M.	Draper, ...		Arm fractured by fall of coal.
22	Charles Sweeda, ...	Polish, ...	Chargeman, ...	23	M.	Draper, ...		Back seriously injured. Fell under cars on slope.
24	John Haverage, ...	Greek, ...	Miner, ...	30	M.	Stanton, ...		Face and hands burned by gas.
	Mathew Elko, ...	Austrian, ...	Miner, ...	31	M.	Stanton, ...		Face and hands burned by gas.
	John Vinconus, ...	Lithuanian,	Miner, ...	50	M.	Stanton, ...		Face and hands burned by gas.
	Domnick Coolinhan, .	Irish, ...	Loader boss, ...	35	S.	Stanton, ...		Face and hands burned by gas.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

West Shenandoah, Kohinoor, Turkey Run, Shenandoah City, Draper, Boston Run, Gilberton, Indian Ridge, Knickerbocker.—Ventilation, drainage and condition as to safety, good.

SUSQUEHANNA COAL COMPANY

William Penn.—Ventilation, drainage and condition as to safety, good.

THOMAS COLLIERY COMPANY

Kehley Run.—Ventilation, drainage and condition as to safety, good.

HARLEIGH-BROOKWOOD COAL COMPANY

Stanton and Lawrence.—Ventilation, drainage and condition as to safety, good.

LOCUST MOUNTAIN COAL COMPANY

Weston.—Ventilation, drainage and condition as to safety, good.

CAMBRIDGE COAL COMPANY

Cambridge.—Ventilation, drainage and condition as to safety, good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

West Shenandoah Colliery.—Buck Mountain Vein stripping, west of breaker, started and finished in 1914. Now mining coal. Shakers and elevators installed at crusher near breaker. Tunnel driven from Buck Mountain vein, South dip, to Seven Foot vein, North dip, on 6th lift; length 486 feet.

Tunnel driven from Mammoth to Skidmore on 5th lift, West Mammoth; length 48 feet.

Air tunnel driven from Skidmore vein, South dip, to Seven Foot, North dip, on 6th lift east of main tunnel; length 233 feet.

Air tunnel driven from Buck Mountain to Seven Foot on 5th lift, west of main tunnel; length 159 feet.

Air tunnel driven from Top Split to Seven Foot on 5th lift, west of main tunnel; length 205 feet.

Thirty-three thousand seven hundred and forty-four cubic yards of slush ran into this mine in year 1914; 692,334 cubic yards to date.

Kohinoor Colliery.—Little Primrose vein stripping near West Line, completed.

No. 9 Slope from shaft level, West Mammoth through rock to Skidmore vein, completed to 3rd lift; length 570 feet.

Concreted No. 1 slope engine house to make same fireproof.

Plane in Skidmore vein completed; length 410 feet.

Tunnel driven from Mammoth to Skidmore vein at foot of plane; 34 feet long.

Sixty thousand seven hundred and ninety cubic yards of slush ran into this mine in year 1914; 1,058,288 cubic yards to date.

Turkey Run Colliery.—No. 8 slope, tunnel driven through fault in Holmes on 7th lift East; 24 feet long.

No. 8 slope, tunnel driven from Four Foot to Primrose on 8th lift East, 204 feet long.

No. 10 slope in Skidmore vein completed 450 feet; and electric hoist installed for same.

A 4-inch steam line made to Mammoth vein stripping; length 1,695 feet.

Shenandoah City Colliery.—Plane made in Seven Foot vein at No. 3 breast, shaft level West gangway No. 2 tunnel; length 330 feet.

Air tunnel made from Skidmore to Mammoth vein from 3rd lift Buck Mountain slope east of No. 3 tunnel; length 21 feet.

Rope haulage system installed at top of Seven Foot plane, about 1,150 feet long.

New headframe at shaft; and shaft concreted for 24 feet from top.

Electric arc lighting system installed inside and outside.

Electric haulage system installed outside.

Draper Colliery.—Tunnel from the East Orchard gangway, 2nd lift to knuckle of New Diamond underground slope, completed in January; distance 26⅓ yards.

Rock slope on 25 degrees from knuckle of Diamond underground slope, 2nd lift, to Diamond vein, completed in January; distance 11 yards.

Underground slope in Diamond vein below 2nd lift to Diamond basin, completed in June; distance 87⅓ yards.

Rock slope on 20 degrees from underground slope in Diamond vein to Orchard vein, completed in December; distance 65⅓ yards.

Tunnel to the Skidmore vein from the East Seven Foot gangway, 2nd lift, at breast No. 24, completed in April; distance 33⅔ yards.

Tunnel to proposed Leader gangway, under No. 2 slope and Skidmore airway, from the West Seven Foot gangway 2nd lift, completed in August; distance 18⅓ yards.

Slate gangway to coal hoisting shaft from the water level No. 4 slope level, completed in September; distance 52 yards.

Electric haulage installed on 1st lift.

Tunnel extended toward the Little Tracy vein from the East Tracy gangway 2nd lift at breast No. 30; distance 68 yards. 24⅓ yards of the above distance were driven prior to 1908 and then work was stopped on account of too much water.

Plane across pitch from 1st to 2nd lift in Skidmore vein, completed in July; distance 170 yards.

Tunnel at bottom of plane Seven Foot to Skidmore, completed; distance 22 yards.

Tunnel at top of plane Seven Foot to Skidmore, completed; distance 21 yards.

Boston Run Colliery.—A tunnel to Little Buck vein from East Buck Mountain gangway, 4th lift, on the line of tunnel to Seven Foot at breast No. 13, was completed; total length 19⅓ yards.

A pump room, 20 feet wide by 16 feet high, was driven between the Buck Mountain and Little Buck veins, on 4th lift, 30 feet east of hoisting slope; total length 19 yards.

A 15 by 28 by 14 by 18 inch compound duplex pump, with 10 by 16 by 18 inch condenser was installed in the above pump room.

Gilberton Colliery.—New air shaft on Buck Mountain airway, to 21 foot fan, to cut out narrow portion of airway, completed in March.

Tunnel from West Buck Mountain gangway, 3rd lift, 250 feet west of Buck Mountain gunboat slope to Seven Foot vein, completed in June; distance 44⅔ yards.

Single and double track tunnel to Mammoth vein from Seven Foot underground slope 1,160 foot level, furnace section, completed in August; single track distance 5⅔ yards; double track distance 30 yards.

Indian Ridge Colliery.—Tunnel through saddle in No. 7 Primrose slope; length 37 feet.

No. 24 bore hole for slush from surface to Mammoth; length 86 feet.

Rock hole for drainage and coal from Buck Mountain to Seven Foot at No. 1 slope Buck Mountain gangway at Breast No. 6; length 112 feet.

Tunnel through roll in Buck Mountain vein No. 5 rock slope plane level; length 37 feet.

Knickerbocker Colliery.—The pump room at foot of tender slope 2nd lift, was made fireproof by replacing wooden timbers with steel girders lagged with "T" rail.

A fireproof hospital was built in divider between Top and Middle Split veins, 2nd lift, 63 feet east of tender slope.

SUSQUEHANNA COAL COMPANY

William Penn Colliery.—Completed fireproof boiler house. Completed installation of heating system in breaker. Installed new boiler coal conveyor. Concreted mouth of No. 1 drift. Completed new colliery fireproof shop. Steam and water lines covered. Empty car hoist remodeled. Built three concrete retaining walls. Made 8⅓ yard tunnel in No. 2 drift; 26⅓ yard tunnel on No. 1 level; 77 yard tunnel on No. 2 level; 9⅓ yard tunnel on No. 3 level. Slant slope, Buck Mountain vein, No. 2 drift.

Built 81 mine cars, 12 mine buggies and 2 dirt dumpers.

THOMAS COLLIERY COMPANY

Kehley Run Colliery.—Drove 282 feet of tunnels connecting the Mammoth, Skidmore and Seven foot veins; five tunnels in all, the largest being 84 feet. Two new jigs were installed in the breaker.

HARLEIGH-BROOKWOOD COAL COMPANY

Stanton Colliery.—Drove tunnel off the second level of the Four Foot slope north to connect with a tunnel off the second level of the Old Mammoth hoisting slope. Distance, when completed, 200 feet. Drove a tunnel off the second level of the Four Foot slope south across the basin (Mahanoy Valley) to meet a tunnel driving north off the second level of the Seven Foot slope; distance, when completed, 720 feet.

A small mule stable was cut in the rock on the second level of the Four Foot slope.

Four Foot slope sunk from the first to the second level, 325 feet on the pitch. Elevation of the second level is 638 feet above mean tide. Pitch of slope at second level is 74 degrees. A tunnel 285 feet long was driven south connecting the Four Foot and Orchard veins off the first lift of the Four Foot slope. A pump room and sump was cut in the rock off the first level of the Four Foot slope, and a 12 by 18 by 8 by18 inch pump installed. A hospital was cut in the rock on the first level off the Four Foot slope. The Skidmore slope was sunk from elevation 834 feet to 648 feet above tide, which opened up the 3½ and 4th lifts. A traveling way, 8 feet high and 6 feet wide and well ventilated, was completed in the Skidmore slope from the fourth lift to the surface. The Buck Mountain slope was sunk 300 feet on the pitch giving the 3½ and 4th lifts. Elevation of fourth lift is 378 feet above tide water. In the 3½ lift a 14 by 26 by 14 by 36 inch Goyne pump was installed with a capacity of about 2,500 gallons per minute.

On the surface a new compressor house and a 12 by 14 by 14½ by 14 inch compressor were installed for the Four Foot slope.

A lamp house, with an ample supply of safety lamps, was built at the top of the Four Foot slope.

The Skidmore slope headframe was rebuilt, replacing the one destroyed by fire. The foreman's office at Stanton was enlarged, and washroom with a shower bath equipment installed.

A breaker wash pump house and a 14 by 26 by 14 by 36 inch pump was installed west of the Stanton breaker.

Lawrence Colliery.—Erected a modern, well constructed breaker of 3,500 tons daily capacity. Breaker contains five pairs of rolls; thirty-two jigs and sixty-four shakers; all machinery rope driven by a large 1,000 H. P. Vulcan engine. Breaker well equipped for fire emergency, with ample supply of water convenient.

Steam-heated and electric-lighted throughout. Coal chutes lead to both the Pennsylvania and the Philadelphia and Reading Railways, at Mahanoy Plane. A flume, 8 feet wide and 3 feet deep and about 800 feet long, was built to carry off the surface water around the Lawrence breaker. The Seven Foot slope was sunk from the first to the second level, 235 feet on the pitch. Elevation of second level is 634 feet above tide water. A traveling way was started in the Seven Foot slope off the first lift to connect with a counter in the Leader vein, under the Mammoth, at elevation of 1,000 feet. A tunnel north across the basin was started from the second level of the Seven Foot slope to meet the tunnel driving south across the basin from the second level of the Four Foot slope. A tunnel was driven south from the second level of the Seven Foot slope to the

Buck Mountain vein, a distance of 110 feet. A trestle 200 feet long and a cleaner of 2,500 tons' capacity connect the Seven Foot slope with the locomotive road.

From the cleaner at the Seven Foot slope a narrow gauge locomotive road, 750 feet long, was laid connecting the cleaner with the Lawrence breaker.

Concrete foundations at the Seven Foot slope airway were completed, upon which are to be installed a 20 foot fan and a large compressor. One hundred and fifty new steel mine cars (capacity 120 cubic feet) were bought and distributed among the slopes at Stanton, Lawrence and West Bear Ridge.

LOCUST MOUNTAIN COAL COMPANY

Weston Colliery.—Outside. A new brick compressor house, pump house and electric sub-station combined, has been built near the mouth of the tunnel. This building is fireproof.

A mine fan has been installed on a fan hole on the North dip of the Little Buck Mountain vein, of the disc type with 7½-15 H. P. motor, capacity 40,000 to 60,000 cubic feet of air per minute, one inch water gauge.

A new frame foreman's office and hospital combined has been built.

Combined car shop and blacksmith shop has been built at the tunnel, for the purpose of repairing mine cars and sharpening drill steel. First Aid teams have been organized for aid to injured men in and around the colliery.

Fifty steel mine cars, capacity 135 cubic feet, have been added.

A new wash water dam, with a capacity of 500,000 gallons, situated above the tunnel, was built for the purpose of holding mine water, which is pumped at night.

Stripping. The engine house at the head of letting-down plane from the stripping has been concreted, making it fireproof. Installed one 30,000 gallon and one 10,000 gallon water tank.

Mines. Installed one 8-ton and one 6-ton electric locomotive armor plate type of the General Electric Company. 36-inch gauge.

A plane is being driven to our counter level in the Little Buck Mountain vein, for the purpose of handling the coal from the counter.

Completed the main tunnel, a distance of 3,807 feet. This had been rerailed with 67 pound rails.

FOURTEENTH DISTRICT

SCHUYLKILL, COLUMBIA AND NORTHUMBERLAND COUNTIES

Centralia, Pa., February 27, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my report as Inspector of Mines for the Fourteenth Anthracite District for the year ending December 31, 1914.

Respectfully submitted,

JAMES A. O'DONNELL, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	14
Number of mines,	37
Number of mines in operation,	37
Number of tons of coal shipped to market,	2,366,220
Number of tons used at mines for steam and heat,	502,557
Number of tons sold to local trade and used by employes,	52,615
Number of tons produced,	2,921,392
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	4,152
Number of persons employed outside,	2,651
Number of fatal accidents inside of mines,	9
Number of fatal accidents outside,	6
Number of non-fatal accidents inside of mines,	53
Number of non-fatal accidents outside,	17
Number of tons of coal produced per fatal accident inside,	324,599
Number of tons produced per fatal accident outside,	486,898
Number of tons produced per fatal accident inside and outside,	194,759
Number of persons employed per fatal accident inside,	461
Number of persons employed per fatal accident outside,	441
Number of persons employed per fatal accident inside and outside,	453
Number of persons employed per non-fatal accident inside,	78
Number of persons employed per non-fatal accident outside,	156
Number of persons employed per non-fatal accident inside and outside,	97
Number of wives made widows,	9
Number of children made orphans,	10
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	32
Number of compressed air locomotives used inside,	6
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	29
Number of electric motors used outside,	1
Number of gasoline locomotives used inside,	4
Number of fans in use,	30
Number of furnaces in use,	.....
Number of gaseous mines in operation,	27
Number of non-gaseous mines in operation,	10
Number of new mines opened,	.....
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Valley Coal Company,	1,568,974
Philadelphia and Reading Coal and Iron Company,	802,035
Midvalley Coal Company,	266,007
Girard Mammoth Coal Company,	222,048
W. R. McTurk Coal Company,	31,164
Beaver Valley Coal Company,	20,210
Harleigh Brookwood Coal Company,	10,954
Total,	2,921,392

Production by Counties

Schuylkill,	1,611,648
Columbia,	952,206
Northumberland,	357,538
Total,	2,921,392

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh Valley Coal Co.,	9	4	13	39	9	48	174,330	40,230	2,155	1,195	3,350	239	299	56	133
Philadelphia and Reading Coal and Iron Co.,	.....	1	1	7	2	9	.....	114,576	1,374	655	2,029	.....	655	196	327
Midvalley Coal Co.,	.....	1	1	6	2	8	.....	44,334	364	192	556	.....	192	60	96
Girard Mammoth Coal Co.,	.....	.....	.....	1	1	2	.....	222,048	122	325	447	.....	.....	122	325
W. R. McTurk Coal Co.,	.....	.....	.....	.....	2	2	.....	.....	51	211	262	.....	.....	.....	105
*East Bear Ridge Coal Co.,	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	86	73	159	.....	.....	.....	.....
Totals and averages,	9	6	15	53	17	70	324,599	55,120	4,152	2,651	6,803	461	441	78	156

Names of Operators	Number of employes outside per non-fatal accident
Lehigh Valley Coal Co.,	133
Philadelphia and Reading Coal and Iron Co.,	327
Midvalley Coal Co.,	96
Girard Mammoth Coal Co.,	325
W. R. McTurk Coal Co.,	105
*East Bear Ridge Coal Co.,	.....
Miscellaneous Companies,	.....
Totals and averages,	156

*Mined no coal. Building a breaker.

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	February	March	January	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	1	....	....	....	....	....	....	....	1	....	2	22.22
Falls of roof,	....	....	....	....	....	....	1	....	....	....	1	....	2	22.23
Mine cars,	....	....	....	....	....	....	....	....	....	....	1	....	1	11.11
Explosions of gas,	....	....	....	....	....	1	....	....	....	....	....	....	1	11.11
Blasts, premature and otherwise,	....	....	....	....	....	1	....	....	....	....	....	....	1	11.11
Struck by piece of rock,	....	....	....	....	....	....	....	1	....	....	....	....	1	11.11
Rush of coal,	....	....	....	....	....	....	....	....	1	....	....	....	1	11.11
Totals,	....	....	1	....	....	2	1	1	1	....	3	....	9	100.00
Outside														
Cars,	1	....	1	....	1	....	....	....	....	....	....	....	3	50.00
Explosions of blast,	....	....	1	....	....	....	....	....	....	....	....	....	1	16.67
Struck by board,	....	....	....	....	....	....	....	....	1	....	....	....	1	16.67
Rush of slate,	....	....	....	....	....	....	....	....	....	....	1	....	1	16.67
Totals,	1	....	2	....	1	....	....	....	1	....	1	....	6	100.00
Grand totals inside and outside,	1	....	3	....	1	2	1	1	2	....	4	....	15	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	1	1	1	2	....	....	3	....	1	3	12	22.64
Falls of roof,	....	....	....	....	....	1	....	....	....	....	....	....	1	1.90
Mine cars,	1	....	....	....	....	....	....	....	....	1	1	3	6	11.32
Explosions of gas,	....	....	3	2	....	5	2	....	4	....	....	....	16	30.18
Explosions of powder and dynamite,	1	....	....	....	....	....	1	....	....	....	....	....	2	3.77
Blasts, premature and otherwise,	....	....	....	....	....	....	....	....	....	....	1	....	1	1.89
Mules,	....	....	....	....	....	....	....	....	....	....	....	1	1	1.89
By falling,	1	1	....	....	....	....	....	....	....	....	....	....	2	3.77
Struck by piece of coal,	....	....	....	1	1	1	....	....	1	....	1	....	5	9.43
Struck by piece of rock,	....	....	....	....	1	....	....	....	....	....	....	....	1	1.89
Struck by piece of steel,	1	....	....	....	....	....	....	....	....	....	....	....	1	1.89
Struck by timber,	....	....	....	....	....	....	....	....	....	1	....	1	2	3.77
Struck by cage,	....	....	....	....	....	....	....	....	....	1	....	....	1	1.89
Struck by rope,	....	....	....	....	....	2	....	....	....	....	....	....	2	3.77
Totals,	4	1	4	4	3	11	3	....	8	3	4	8	53	100.00
Outside														
Cars,	....	....	1	....	1	....	....	1	....	....	....	....	3	17.65
Machinery,	1	....	1	1	....	....	....	....	....	1	....	....	4	23.53
By falling,	....	2	....	....	....	....	....	....	....	2	1	2	7	41.18
Mules,	....	....	....	1	....	....	....	....	....	....	....	....	1	5.88
Rush of bank,	....	....	....	....	....	....	....	....	....	....	1	....	1	5.88
Struck by timber,	....	....	....	....	....	....	....	....	....	....	....	1	1	5.88
Totals,	1	2	2	2	1	....	....	1	....	3	2	3	17	100.00
Grand totals inside and outside,	5	3	6	6	4	11	3	1	8	6	6	11	70	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	....	1	....	....	1	1	1	....	....	2	....	6
Miners' laborers,	....	....	....	....	....	1	....	....	....	....	....	....	1
Timbermen,	....	....	....	....	....	....	....	....	1	....	....	....	1
Loaders,	....	....	....	....	....	....	....	....	....	....	1	....	1
Totals,	....	....	1	....	....	2	1	1	1	....	3	....	9
Outside													
Foremen,	....	....	1	....	....	....	....	....	....	....	....	....	1
Blacksmiths and carpenters,	....	....	....	....	....	....	....	....	1	....	....	....	1
Laborers,	1	....	1	....	1	....	....	....	....	....	1	....	4
Totals,	1	....	2	....	1	....	....	....	1	....	1	....	6
Grand totals inside and outside,	1	....	3	....	1	2	1	1	2	....	4	....	15

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2	....	2	1	...	7	2	....	4	1	2	3	24
Miners' laborers,	....	....	2	2	2	3	....	....	3	1	2	2	17
Drivers and runners,	....	....	....	....	1	....	....	....	....	....	....	1	2
Doorboys and helpers,	....	....	....	....	....	....	....	....	....	....	....	1	1
Motormen,	1	....	....	....	....	....	....	....	....	....	....	....	1
Motor helpers,	1	....	....	....	....	....	....	....	....	....	....	....	1
Electricians,	....	1	....	....	....	....	....	....	....	....	....	....	1
Starters,	....	....	....	1	....	....	1	....	....	....	....	....	2
Hitchers,	....	....	....	....	....	1	....	....	....	....	....	....	1
Repairmen,	....	....	....	....	....	....	....	....	1	1	....	....	2
Timbermen,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	4	1	4	4	3	11	3	....	8	3	4	8	53
Outside													
Blacksmiths and carpenters,	1	1	....	....	....	....	....	....	....	....	1	2	5
Slatepickers (boys),	....	1	....	....	....	....	....	....	....	1	....	....	2
Conductors,	....	....	1	....	....	....	....	....	....	....	....	....	1
Jigtenders,	....	....	1	....	....	....	....	....	....	....	....	....	1
Laborers,	....	....	....	2	1	....	....	1	....	1	1	....	6
Watchmen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Machinists,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	1	2	2	2	1	....	....	1	....	3	2	3	17
Grand totals inside and outside,	5	3	6	6	4	11	3	1	8	6	6	11	70

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	....	2	....	....	....	1	....	1	....	....	....	5
Polish,	....	....	....	....	....	1	....	....	....	....	2	....	3
Slavonian,	....	....	1	....	....	....	....	....	....	....	....	....	1
Lithuanian,	....	....	....	....	....	....	....	....	1	....	....	....	1
Austrian,	....	....	....	....	....	....	....	1	....	....	2	....	3
Russian,	....	....	....	....	1	1	....	....	....	....	....	....	2
Totals,	1	....	3	....	1	2	1	1	2	....	4	....	15

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
American,	3	3	2	3	2	4	1	....	2	4	2	6	32
German,	....	....	....	....	....	1	....	....	....	....	....	1	2
Polish,	....	....	....	1	1	2	2	....	1	1	1	1	10
Hungarian,	....	....	....	....	....	....	....	....	....	....	....	1	1
Italian,	....	....	....	....	....	....	....	1	....	....	1	....	2
Slavonian,	....	....	....	....	....	....	....	....	1	....	....	1	2
Lithuanian,	1	....	3	1	....	2	....	....	2	1	2	....	12
Austrian,	....	....	....	....	1	1	....	....	1	....	....	1	4
Russian,	1	....	1	1	....	1	....	....	1	....	....	....	5
Totals,	5	3	6	6	4	11	3	1	8	6	6	11	70

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Lehigh Valley Coal Co.															
Centralia Colliery:															
Centralia,	Slope,	Gaseous,	Fan,	15.0	5.0	5.0	78	.5	Guibal,	Steam,	6	57,000	57,000	60,000	63
Continental,	Shaft,	Gaseous,	2 Fans,	20.0	5.10	6.8	67	.8	Guibal,	Steam,	4	26,000	26,000	28,000	62
				12.0	3.6	1.9	72	.7	Guibal,	Gasoline,	3	20,000	20,000	21,000	43
Locust Run,	Slope,	Gaseous,	Fan,	6.0	4.8	1.0	192	.6	Buffalo,	Electricity,	5	46,000	46,000	48,000	79
Logan,	Slope,	Gaseous,	Fan,	15.0	4.0	3.0	75	.6	Guibal,	Electricity,	6	44,000	44,000	46,000	57
Sayre Colliery:															
Sayre,	Shaft,	Gaseous,	Fan,	20.0	6.8	6.1	70	.75	Guibal,	Steam,	8	38,000	38,000	41,000	69
Sioux No. 3,	Slope,	Gaseous,	Fan,	16.0	4.8	5.0	85	1.0	Guibal,	Steam,	11	69,000	69,000	73,000	154
Bellmore,	Drift,	Gaseous,	Fan,	7.0	2.9	1.10	134	.25	Guibal,	Steam,	4	12,000	12,000	13,000	21
Morris Ridge,	Slope,	Gaseous,	Fan,	12.0	4.6	2.9	85	.5	Guibal,	Oil,	3	23,000	23,000	25,000	43
Packer No. 2 Colliery:															
Packer No. 2,	Slope,	Gaseous,	Fan,	20.0	6.0	5.5	75	1.0	Guibal,	Steam,	3	66,000	66,000	69,000	170
Packer No. 3 Colliery:															
Packer No. 3,	Slope,	Gaseous,	Fan,	18.0	6.0	5.4	70	.6	Guibal,	Steam,	11	81,000	81,000	85,000	125
Packer No. 4 Colliery:															
Packer No. 4,	Slope,	Gaseous,	Fan,	20.0	6.9	5.11	62	1.0	Guibal,	Steam,	12	89,000	89,000	93,000	200
Packer No. 5 Colliery:															
Packer No. 5,	Shaft,	Gaseous,	Fan,	20.0	6.0	5.6	74	1.2	Guibal,	Steam,	10	75,000	75,000	78,000	164
Packer No. 5,	Drift,	Gaseous,	Fan,	15.0	4.1	4.7	72	.5	Guibal,	Steam,	10	95,000	95,000	98,000	221

Philadelphia and Reading Coal and Iron Co.																
Hammond Colliery:																
Hammond, ...	Shaft, ...	Gaseous, ..	Fan, ...	21.0	7.0	6.0	45	2.2	Guibal, ...	Steam,.....	10	75,000	75,000	78,000	122
Hammond, ...	Slope,.. ..	Gaseous, ..	Fan, ...	21.0	7.0	6.0	45	2.2	Guibal, ...	Steam,.....	6	75,000	75,000	78,000	112
Hammond Nos. 1, 2, 3, 4,	Drift, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....
Hammond, Top Split and Seven Foot, ...	Drift, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....
Bast Colliery:																
Bast, ...	Slope,.....	Gaseous, ..	Fan, ...	21.0	7.0	6.0	85	2.5	Guibal, ...	Steam,.....	5	78,000	78,000	81,000	110
Bast Nos. 2, 5 and 6, ...	Drift, ...	Gaseous, ..	Fan, ...	21.0	7.0	6.0	85	2.5	Guibal, ...	Steam,.....	4	78,000	78,000	81,000	104
Potts Colliery:																
Potts Mammoth, ...	Slope,.....	Gaseous, ..	2 Fans, ..	18.0	6.0	5.0	72	2.1	Guibal, ...	Steam,.....	6	70,000	70,000	73,000	186
Potts Primrose, ...	Slope,.....	Gaseous, ..	Fan, ...	21.0	7.0	6.0	72	1.2	Guibal, ...	Steam,.....	6	56,000	56,000	58,000	182
Midvalley Coal Co.																
Midvalley Colliery:																
Midvalley No. 7, ...	Slope,.....	Gaseous, ..	2 Fans, ..	18.0	5.6	.5	75	1.2	Vulcan, ...	Steam,.....	8	114,000	114,000	119,000	105
				16.0	4.6	4.10	75	1.0							
Midvalley No. 4, ...	Drift, ...	Gaseous, ..	Fan, ...	16.0	4.6	4.10	75	1.0	Vulcan, ...	Steam,.....	1	8,000	8,000	9,000	6
Midvalley No. 5, ...	Drift, ...	Non-gas., .	Fan, ...	6.0	3.0	2.0	120	.3	Sturtevant,	Gasoline, ...	1	12,000	12,000	13,000	33
Midvalley No. 4, ...	Slope,.....	Gaseous, ..	Fan, ...	24.0	8.0	7.0	65	1.2	Vulcan, ...	Steam,.....	6	86,000	86,000	90,000	120
Girard Mammoth Coal Co.																
Girard Mammoth Colliery:																
Girard Mammoth, ...	Slope,.....	Gaseous, ..	Fan, ...	8.0	2.10	1.10	90	.5	Buffalo, ...	Steam,.....	2	15,000	15,000	16,000	64
Girard Mammoth, ...	Drift, ...	Non-gas., .	Fan, ...	18.0	6.0	6.0	45	.3	Guibal, ...	Electricity,.	2	30,000	30,000	32,000	58
W. R. McTurk Coal Co.																
Girard Bear Ridge Colliery:																
Girard Bear Ridge No. 1,	Slope,.....	Gaseous, ..	Fan, ...	12.0	4.0	3.0	120	1.5	Guibal, ...	Steam,.....	3	32,000	32,000	35,000	42
Girard Bear Ridge No. 2,	Slope,.....	Gaseous, ..	Fan, ...	8.0	2.0	3.0	100	1.0	Carter, ...	Steam,.....	1	5,000	5,000	5,500	9
Beaver Valley Coal Co.																
Scotch Valley Colliery:																
Scotch Valley, ...	Drift, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....
Harleigh Brookwood Coal Co.																
West Bear Ridge Colliery:																
West Bear Ridge, ...	Slope,.....	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	.....

TABLE 1.—Operators, location of collieries, railroads, etc

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Valley Coal Co.						
Centralia,	Columbia,	Thomas Thomas, ...	Wilkes-Barre, ...	H. J. Heffner, ...	Centralia, ...	Lehigh Valley
Sayre,	Northumberland					
Packer Nos. 2, 3, 4, 5,	Schuylkill,					
Philadelphia and Reading Coal and Iron Co.						
Hammond,	Schuylkill,	G. B. Hadesty, ...	Pottsville, ...	Reese Tasker, ...	Pottsville, ...	P. and R.
Bast,	Schuylkill,					
Potts,	Columbia,					
Midvalley Coal Co.						
Midvalley,	Columbia, ...	T. E. Snyder, ...	Hazleton, ...	H. D. Kostenbauder,	Wilburton, ...	Lehigh Valley
Girard Mammoth Coal Co.						
Girard Mammoth, ...	Schuylkill, ...	Timothy Cockhill, ...	Mahanoy City, ...	William Palmer, ...	Mahanoy City, ...	P. and R.
W. R. McTurk Coal Co.						
Girard Bear Ridge, ...	Schuylkill, ...	Morton H. McTurk,	Hazleton, ...	E. M. Lamb, ...	Girardville, ...	P. and R.
Beaver Valley Coal Co.						
Scotch Valley, ...	Columbia, ...	Grafflin Cook, ...	Baltimore, Md., ...	Charles W. Harlor, ..	Beaver Valley, ...	Pennsylvania
Harleigh Brookwood Coal Co.						
West Bear Ridge, ...	Schuylkill, ...	Frank A. Hill, ...	Pottsville, ...	John Price, ...	Shenandoah, ...	P. and R.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Lehigh Valley Coal Co.													
Centralia,	Columbia,	356,420	63,424	5,813	425,657	215	724	3	10	.....	191,094	.....	70
Sayre,	Northumberland,	234,225	68,096	5,217	357,538	236	707	3	17	7,000	201,060	.....	37
Packer No. 2,	Schuylkill,	122,108	23,046	.....	145,154	220	267	1	2	1,300	68,329	.....	14
Packer No. 3,	Schuylkill,	122,315	304	.....	122,619	220	271	1	2	8,175	31,687	.....	31
Packer No. 4,	Schuylkill,	90,452	94,408	8,972	193,832	290	545	2	6	25,325	48,239	.....	17
Packer No. 5,	Schuylkill,	306,170	18,004	.....	324,174	280	836	3	11	34,125	144,337	.....	26
Totals,	.....	1,281,690	267,282	20,002	1,568,974	.....	3,350	13	48	75,925	685,296	.....	195
Philadelphia and Reading Coal and Iron Co.													
Hammond,	Schuylkill,	264,293	56,614	7,859	328,766	231	730	1	5	225	100,603	66,854	33
Bast,	Schuylkill,	166,153	55,798	10,986	232,937	239	643	.....	2	.....	113,908	22,760	80
Potts,	Columbia,	192,451	39,328	8,553	240,332	219	656	.....	2	.....	68,590	39,730	77
Totals,	.....	622,897	151,740	27,398	802,035	.....	2,029	1	9	225	283,101	129,284	190
Midvalley Coal Co.													
Midvalley,	Columbia,	224,765	38,040	3,202	266,007	214	556	1	8	3,675	163,000	.....	42
Girard Mammoth Coal Co.													
Girard Mammoth,	Schuylkill,	190,664	30,000	1,384	222,048	282	447	.....	2	50,375	43,337	.....	20
W. R. McTurk Coal Co.													
Girard Bear Ridge,	Schuylkill,	18,904	12,260	.....	31,164	69	262	.....	2	.....	11,075	.....	22

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Beaver Valley Coal Co. Scotch Valley,	Columbia,	17,229	2,352	629	20,210	134	124	.....	.....	.....	4,000	.....	6
Harleigh Brookwood Coal Co. West Bear Ridge,	Schuylkill,	10,071	883	.....	10,954	147	35	.....	.....	.....	13,725	.....	2
East Bear Ridge Coal Co.,*	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Grand totals,	.....	2,366,220	502,557	52,615	2,921,392	.....	6,803	15	70	130,200	1,203,534	129,284	477

*No data; breaker in course of construction.

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Lehigh Valley Coal Co., ...	Columbia, ... / Schuylkill, ... / Northumberland, ..	15	555	50	10,400	10,955	1	12	....	27	161	16,869	18	22,120	16,173	5	2
Philadelphia and Reading Coal and Iron Co., ...	Schuylkill, ... / Columbia, ...	....	.....	52	6,750	6,750	....	6	6	....	114	16,564	7	15,584	7,635	.....	5
Midvalley Coal Co., ...	Columbia, ...	.....	.....	16	3,150	3,150	3	7	....	....	33	923	8	10,256	2,300	.....	.....
Girard Mammoth Coal Co., ..	Schuylkill, ...	.....	.....	8	1,600	1,600	....	3	....	3	13	400	5	6,000	6,000	1	.....
W. R. McTurk Coal Co., ...	Schuylkill, ...	.....	.....	9	2,430	2,430	....	4	....	....	23	2,035	2	4,000	1,800	.....	1
Beaver Valley Coal Co., ...	Columbia, ...	.....	.....	3	350	350	....	....	....	....	3	160	.....	.....	.....	.....	.....
Harleigh Brookwood Coal Co.,	Schuylkill, ...	.....	.....	2	200	200	....	....	....	....	1	70	1	200	96	.....	1
Totals, ...	.....	15	555	140	24,880	25,435	4	32	6	30	348	37,021	41	58,160	34,004	6	9

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside												Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh Valley Coal Co.,	Columbia, ...	15	56	....	686	576	79	38	26	....	679	2,155	1	14	204	136	59	19	14	748	1,195	3,350
	Schuylkill, ...																					
Philadelphia and Reading Coal and Iron Co.,	Northumberland, Schuylkill, ... Columbia, ...	5	35	....	235	231	68	45	15	167	573	1,374	...	6	27	96	77	36	14	399	655	2,029
Midvalley Coal Co., ...	Columbia, ...	3	6	....	146	131	18	3	6	51	.....	364	1	1	12	22	17	6	3	130	192	556
Girard Mammoth Coal Co.,	Schuylkill, ...	1	1	1	21	35	13	....	5	45	.....	122	1	1	10	38	37	9	2	227	325	447
W. R. McTurk Coal Co.,.	Schuylkill, ...	1	....	1	7	18	4	3	2	15	.....	51	1	1	11	18	16	9	2	153	211	262
Beaver Valley Coal Co.,..	Columbia, ...	1	1	....	15	28	4	....	....	13	4	66	1	2	4	5	5	1	1	39	58	124
Harleigh Brookwood Coal Co., ...	Schuylkill, ...	1	1	....	5	4	1	....	2	2	4	20	....	....	....	5	....	....	....	10	15	35
Totals, ...	.....	27	100	2	1,115	1,023	187	89	56	293	1,260	4,152	5	25	268	320	211	80	36	1,706	2,651	6,803

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Lehigh Valley Coal Co.,	Schuylkill, ...	14	12	14	22	23	24	17	15	24	24	18	16	223
	Columbia, ...													
	Northumberland, ..													
Philadelphia and Reading Coal and Iron Co.,	Schuylkill, ...	19	16	18	24	24	18	12	15	21	20	21	19	227
	Columbia, ...													
Midvalley Coal Co.,	Columbia, ...	21	16	20	21	22	21	23	6	17	19	13	15	214
Girard Mammoth Coal Co.,	Schuylkill, ...	23	20	23	25	24	24	23	23	25	26	22	24	282
W. R. McTurk Coal Co.,	Schuylkill, ...	19	15	20	15	.....	.....	.....	.....	.....	.....	.....	.....	69
Beaver Valley Coal Co.,	Columbia, ...	15	18	16	.....	.....	.....	.....	5	20	26	19	15	134
Harleigh Brookwood Coal Co.,	Schuylkill, ...	24	24	25	25	24	25	.....	.....	.....	.....	.....	.....	147

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 12	Raymond Seamore, ...	American, ..	Laborer, ...	20	S.	....	....	Hammond, ...	Schuylkill,.....	Killed while uncoupling cars in motion at bottom of outside plane. Outside.
March 6	Patrick Boyle, ...	American, ..	Stripping-foreman.	48	M.	1	1	Sayre, ...	Northumberland,.	Fatally injured by being struck on head by a flying rock from a blast in stripping. Died March 18. Outside.
12	Hugh Green, ...	American, ..	Miner, ...	54	M.	....	....	Packer No. 5,..	Schuylkill,.....	Killed by fall of coal at face of breast while making room for timber.
20	George Broderick, ...	Slavonian,..	Laborer, ...	54	M.	1	4	Midvalley, ...	Columbia, ...	Fatally injured by being bumped between cars while unloading boiler fuel near boiler house. Outside.
May 4	George Wilkeites, ...	Russian, ...	Laborer, ...	71	M.	....	....	Packer No. 4,...	Schuylkill,.....	Killed by being struck by cars that were being pushed by a motor from the refuse bank to the breaker. He was carrying sand across the track for the building of a foundation. Outside.
June 6	Sam Warhorse, ...	Russian, ...	Laborer, ...	20	S.	....	....	Sayre, ...	Northumberland,.	Fatally burned by explosion of gas. The miner fired three blasts at one time in face of gangway and then retreated about 100 feet back from face. A few minutes after blasts went off there was an explosion of gas, caused by ignited gas feeders or burning fuse.
11	Walter Unbanskie, ...	Polish,.....	Miner, ...	27	S.	...	....	Packer No. 3,...	Schuylkill,.....	Killed by premature blast. He was firing two blasts at one time. He had ignited the squib on one and while he was igniting the second the first exploded and caught him.
July 23	Robert Anderson, ...	American, ..	Miner, ...	47	M.	1	1	Centralia, ...	Columbia, ...	Killed by fall of rock at face of breast. He was placing sheet iron when the rock fell on him.
Aug. 5	John Pricilla, ...	Austrian, ..	Miner, ...	50	M.	1	4	Centralia, ...	Columbia, ...	Killed by a piece of rock that rolled down over the gob and striking him on the side crushing in his ribs. He was driving a cross-cut on the pillar between two breasts used as a rock dump.

Sept.	4	William K. Moyer, ...	American, ..	Carpenter, ...	77	M.	1	....	Packer No. 5,..	Schuylkill,.....	Killed by being struck in the face by a board that he was cutting on a circular saw in carpenter shop. Outside.
	16	Anthony Foremansky,.	Lithuanian,	Timberman, ..	34	M.	1	....	Packer No. 5,..	Schuylkill,.....	Killed by rush of coal from an old chute on gangway. He was driving a prop under a broken collar when the top fell in on him.
Nov.	13	Adam Greenwalt, ...	Polish,.....	Miner, ...	49	M.	1	....	Packer No. 4,...	Schuylkill,.....	Fatally injured by fall of coal at face of breast. Died December 28.
	19	Joseph Morofski, ...	Austrian, ..	Miner, ...	58	M.	1	....	Centralia, ...	Columbia, ...	Killed by fall of rock at face of pillar robbing. The place was propped to the face the rock fell from between the props.
	21	Henry Popinski, ...	Polish,.....	Loader, ...	20	S.	....	....	Packer No. 2,...	Schuylkill,.....	Killed by being caught between top of car and a chute spout on gangway. He was on the front of trip of cars with the driver and reached over the top of car to get an oil can.
	23	Adam Rable, ...	Austrian, ..	Laborer, ...	55	M.	1	....	Sayre, ...	Northumberland,.	Killed by rush of slate and ashes. They were cutting through an old bank to reopen an old abandoned drift when one side of the bank closed in and caught them. Another laborer was slightly injured. Outside.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 12	William Drogalis, ...	Russian, ...	Miner, ...	60	M.	Packer No. 4, ...	Schuylkill,.....	Leg fractured by falling in breast manway.
22	Lewis Vitcofskie, ...	Lithuanian,	Miner, ...	52	M.	Packer No. 3, ...	Schuylkill,.....	Wrist shattered by explosion of a box of dynamite caps.
23	Frank Handly, ...	American,..	Carpenter, ...	23	S.	Centralia, ...	Columbia, ...	Foot bruised by machinery falling on him. Outside.
27	William Thompson, ..	American,..	Motorman, ...	30	M.	Sayre, ...	Northumberland,.	Arm crushed. Caught between motor and car while coupling.
	Stanley Brown, ...	American,..	Motor-helper, ...	19	S.	Sayre, ...	Northumberland,.	Two toes cut off by a steel beam that he was handling on cage.
Feb. 5	Harry Bennie, ...	American,..	Carpenter, ...	21	S.	Girard-Bear Ridge,.	Schuylkill,.....	Body bruised by falling from roof of boiler house. Outside.
24	Evan Williams, ...	American,..	Electrician, ...	32	M.	Centralia, ...	Columbia, ...	Shoulder blade fractured by falling into repair pit.
25	George Foy, ...	American,..	Slatepicker, ...	16	S.	Girard-Bear Ridge,.	Schuylkill,.....	Leg fractured by falling into a pocket in breaker. Outside.
March 14	Allen Knittle, ...	American,..	Conductor, ...	19	S.	Packer No. 5, ...	Schuylkill,.....	Leg fractured by being bumped between cars. Outside.
24	Steve Matsell, ...	Lithuanian,	Laborer, ...	27	M.	Packer No. 5, ...	Schuylkill,.....	Face and hands burned by explosion of gas.
26	Michael Gedack, ...	Lithuanian,	Miner, ...	25	S.	Sayre, ...	Northumberland,.	Hands and face burned by explosion of gas.
30	Thomas Cavanaugh, ..	American,..	Miner, ...	29	M.	Packer No. 5, ...	Schuylkill,.....	Head lacerated by fall of coal at face.
	Wasel Tofel, ...	Lithuanian,	Jig tender, ...	17	S.	Sayre, ...	Northumberland,.	Collar bone fractured by machinery in breaker. Outside.
31	Ben Novel, ...	Russian, ...	Laborer, ...	23	S.	Sayre, ...	Northumberland,.	Face and hands burned by explosion of gas.
April 2	Thomas Callahan, ...	American,..	Laborer, ...	23	S.	Girard Mammoth, .	Schuylkill,.....	Leg fractured by a mule stepping on him. Outside.
7	Barney Barnoski, ...	Polish,.....	Laborer, ...	21	S.	Packer No. 4, ...	Schuylkill,.....	Big toe cut off by fall of coal at face.
11	Anthony Barnofski, ..	Lithuanian,	Miner, ...	40	M.	Packer No. 5, ...	Schuylkill,.....	Hands burned by explosion of gas.
	Alfred Wasser, ...	American,..	Laborer, ...	22	S.	Packer No. 5, ...	Schuylkill,.....	Face and hands burned by explosion of gas.
23	Thomas Monaghan, ...	American,..	Laborer, ...	38	S.	Hammond, ...	Schuylkill,.....	Leg fractured by a piece of machinery falling on it. Outside.

April	28	Joseph Hovanes, ...	Russian, ...	Starter, ...	22	S.	Midvalley, ...	Columbia, ...	Thumb cut off by a piece of coal at breast chute board.
May	5	Anthony Grafft, ...	Polish,.....	Laborer, ...	21	S.	Hammond, ...	Schuylkill,.....	Skull fractured by a piece of coal that rolled down chute.
	7	Thomas McDonnell, ..	American,..	Runner, ...	44	M.	Centralia, ...	Columbia, ...	Leg fractured by being struck by piece of rock off the side of tunnel.
	11	John Corbert, ...	Austrian, ..	Laborer, ...	40	M.	Centralia, ...	Columbia, ...	Foot fractured by fall of coal at face.
	20	Felix Kessler, ...	American,..	Laborer, ...	47	M.	Centralia, ...	Columbia, ...	Skull fractured by cars on plane. Outside.
June	3	Sam Mallams, ...	American,..	Miner, ...	33	M.	Hammond, ...	Schuylkill,.....	Leg fractured by fall of coal at face.
	6	John Valskie, ...	Polish,.....	Laborer, ...	23	S.	Sayre, ...	Northumberland,.	Hands and face burned by explosion of gas.
		Sam Wagner, ...	American,..	Miner, ...	38	M.	Sayre, ...	Northumberland,.	Hands and face burned by explosion of gas.
		Charles Becker, ...	German, ...	Miner, ...	60	M.	Sayre, ...	Northumberland,.	Hands and face burned by explosion of gas.
	16	Michael Wasser, ...	Lithuanian,	Laborer, ...	39	M.	Packer No. 2, ...	Schuylkill,.....	Face burned by explosion of gas.
	22	William Wysockovage,	Russian, ...	Miner, ...	42	M.	Sayre, ...	Northumberland,.	Leg fractured by fall of coal at face.
	23	Ira George, ...	American,..	Hitcher, ...	22	S.	Midvalley, ...	Columbia, ...	Skull fractured by a lump of coal that rolled down the slope.
	25	Andrew Shalk, ...	Lithuanian,	Laborer, ...	52	M.	Packer No. 2, ...	Schuylkill,.....	Top of thumb cut off. Caught between rope and pulley.
	26	Frank Sawalick, ...	Polish,.....	Miner, ...	31	M.	Midvalley, ...	Columbia, ...	Pelvic bone and collar bone fractured by fall of coal at face.
	27	John Maul, ...	American,..	Miner, ...	36	M.	Sayre, ...	Northumberland,.	Face and hands burned by explosion of gas.
	30	John Pizarski, ...	Austrian, ..	Miner, ...	40	M.	Centralia, ...	Columbia, ...	Leg fractured by being struck by a swinging rope on slope.
July	7	George Rodgers, ...	Polish,.....	Miner, ...	46	M.	Midvalley, ...	Columbia, ...	Face and hands burned by explosion of gas.
		John Rivetts, ...	Polish,.....	Miner, ...	47	S.	Midvalley, ...	Columbia, ...	Face and hands burned by explosion of gas.
	22	John Raker, ...	American,..	Starter, ...	40	S.	Midvalley, ...	Columbia, ...	Hand blown off by explosion of dynamite.
Aug.	10	Frank Ranie, ...	Italian,.....	Laborer, ...	35	M.	Bast, ...	Schuylkill,.....	Head and chest bruised by car on rock bank. Outside.
Sept.	11	Frank Kildock, ...	Russian, ...	Miner, ...	26	M.	Sayre, ...	Northumberland,.	Face slightly burned by explosion of gas.
	12	Joseph Vimrick, ...	Lithuanian,	Miner, ...	31	M.	Packer No. 5, ...	Schuylkill,.....	Face burned by explosion of gas.
	18	Steve Hobser, ...	Polish,.....	Laborer, ...	22	M.	Packer No. 5, ...	Schuylkill,.....	Ankle dislocated by fall of coal at face.
	21	Martin Andenatto, ...	Austrian, ..	Laborer, ...	47	M.	Sayre, ...	Northumberland,.	Face and hands burned by explosion of gas.
	22	Henry Whitaker, ...	American,..	Repairman, ...	64	M.	Sayre, ...	Northumberland,.	Face and hands burned by explosion of gas.
		Alex Shula, ...	Slavonian,..	Laborer, ...	24	M.	Packer No. 5, ...	Schuylkill,.....	Knee dislocated by fall of coal in chute near gangway.
	26	Joseph Wunkartes, ...	Lithuanian,	Miner, ...	49	M.	Packer No. 4, ...	Schuylkill,.....	Pelvis fractured by fall of coal at face.
	28	Olliver Miller, ...	American,..	Miner, ...	43	M.	Centralia, ...	Columbia, ...	Ribs fractured by falling from platform onto rail of gangway.
Oct.	12	Michael Bolger, ...	Lithuanian,	Laborer, ...	23	S.	Packer No. 5, ...	Schuylkill,.....	Two ribs fractured by falling in breaker. Outside.
	13	James Cartwright, ...	American,..	Slatepicker, ...	16	S.	Midvalley, ...	Columbia, ...	Small toe cut off by machinery in breaker. Outside.
	15	Michael Brennan, ...	American,..	Watchman, ...	57	M.	Centralia, ...	Columbia, ...	Body bruised by falling into a stripping. Outside.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 20	William Klingerman, .	American, ..	Repairman, ...	44	M.	Sayre, ...	Northumberland,.	Hand cut off by descending cage in shaft.
28	Sebasten Batistas, ...	Polish,.....	Laborer, ...	38	M.	Bast, ...	Schuylkill,.....	Leg fractured by timber falling on him while unloading from a car.
	Olliver Miller, ...	American, ..	Miner, ...	43	M.	Centralia, ...	Columbia, ...	Ribs fractured by being caught between car and timber on gangway.
Nov. 14	Emil Strockvine, ...	American, ..	Carpenter, ...	22	M.	East Bear Ridge,..	Schuylkill,.....	Pelvis fractured by falling from breaker in course of erection. Outside.
18	William Bendlopski, ..	Polish,.....	Laborer, ...	33	S.	Sayre, ...	Northumberland,.	Collar bone fractured by being bumped between cars on gangway.
20	Julie Kuchoe, ...	Italian, ...	Miner, ...	38	M.	Girard Mammoth, .	Schuylkill,.....	Eye destroyed by premature blast in tunnel.
23	James Davis, ...	American, ..	Laborer, ...	37	S.	Sayre, ...	Northumberland,.	Shoulder dislocated by rush of slate and ashes from a bank. Outside.
24	John Beleski, ...	Lithuanian,	Miner, ...	25	S.	Packer No. 4, ...	Schuylkill,.....	Arm fractured by fall of coal at face.
25	John Lock, ...	Lithuanian,	Laborer, ...	47	M.	Packer No. 5, ...	Schuylkill,.....	Knee bruised by coal that rolled down chute.
Dec. 4	John Minnier, ...	American,..	Machinist, ...	16	S.	Midvalley, ...	Columbia, ...	Bone in foot dislocated and ligaments torn by falling in breaker. Outside.
	George Lawler, ...	American, ..	Driver, ...	36	S.	Packer No. 3, ...	Schuylkill,.....	Collar bone fractured by being caught between car and rib while retracking car.
5	Alex Shappie, ...	Hungarian, .	Laborer	35	M.	Hammond, ...	Schuylkill,.....	Leg fractured by being caught by mine car on gangway.
7	Robert Hindmanch, ..	American, ..	Miner, ...	54	M.	Sayre, ...	Northumberland,.	Leg fractured by fall of coal at face.
	Peter Slovick, ...	Polish,.....	Timberman, ...	35	M.	Packer No. 4, ...	Schuylkill,.....	Deep gash cut in foot by coal falling on him on gangway.
9	Robert Toewee, ...	German, ...	Miner, ...	53	M.	Potts, ...	Columbia, ...	Shoulder dislocated by fall of coal at face.
14	Robert Guinther, ...	American, ..	Doortender, ...	17	S.	Potts, ...	Columbia, ...	Ribs fractured by being kicked by mule.
21	Charles Bolinskie, ...	Slavonian,..	Miner, ...	25	M.	Hammond, ...	Schuylkill,.....	Leg fractured. While unloading timber from car a stick fell on his leg.
	Michael Balick, ...	Austrian, ..	Laborer, ...	33	S.	Centralia, ...	Columbia, ...	Clavicle fractured by being squeezed between car and brattice.
22	William Reinhart, ...	American, ..	Carpenter, ...	48	M.	Packer No. 4, ...	Schuylkill,.....	Leg fractured by wooden bent falling on him. Outside.
23	John Griffiths, ...	American, ..	Carpenter, ...	24	S.	Packer No. 5, ...	Schuylkill,.....	Body bruised by falling from derrick pole. Outside.

CONDITION OF COLLIERIES

LEHIGH VALLEY COAL COMPANY

Centralia, Sayre, Packer Nos. 2, 3, 4 and 5.—Ventilation, drainage and condition as to safety, good.

PHILADELPHIA AND READING COAL AND IRON COMPANY

Hammond, Bast and Potts.—Ventilation, drainage and condition as to safety, good.

MIDVALLEY COAL COMPANY

Midvalley.—Ventilation and condition as to safety, good. Drainage fair.

GIRARD MAMMOTH COAL COMPANY

Girard Mammoth.—Ventilation and condition as to safety, good. Drainage fair.

W. R. McTURK COAL COMPANY

Girard Bear Ridge.—Ventilation and condition as to safety, good. Drainage fair.

BEAVER VALLEY COAL COMPANY

Scotch Valley.—Ventilation and drainage fair. Condition as to safety, good.

HARLEIGH BROOKWOOD COAL COMPANY

West Bear Ridge.—Ventilation fair. Drainage and condition as to safety, good.

IMPROVEMENTS

LEHIGH VALLEY COAL COMPANY

Centralia Colliery.—A rock tunnel was driven from the Mammoth Leader South dip to the Mammoth Leader North dip, 3rd level, 64 feet.

Tunnel driven from the Skidmore to the Buck Leader, 108 feet. Tunnel driven from the Skidmore to the Seven Foot, 1st level, 83 feet. Tunnel from the Four Foot to the Mammoth Leader, 2nd level, 18 feet. Two 300 H. P. Stirling boilers added to the boiler plant. Installed new 12-inch steam line from boiler house to Seven Foot slope and breaker engines.

Continental Shaft.—Fireproof hospital was built outside. Made a 4-inch diamond drill hole from the Holmes basin to the Mammoth vein, 233 feet for draining water.

Logan Slope.—No. 5 slope was reopened and an electric hoist placed at slope.

Locust Run Slope.—Fireproof hospital was built outside.

Sayre Colliery.—A tunnel was driven from the Skidmore to the Seven Foot, 3rd level, 30 feet long.

A pump house was made in the rock at 3rd level, 120 feet long, 20 feet wide, 16 feet high; 290 feet of sump made, and a 25 by 44 by 15 by 48 inch Goyne duplex pump installed.

A new 14-inch column line installed from the 3rd to 2nd level.

A tunnel was driven on 2nd level from bottom split of Holmes to Skidmore, 270 feet, and from the face of the tunnel a bore hole started to tap the Bellmore and Mammoth workings. A new sump made in Holmes 2nd level, 114 feet.

Sioux No. 3 Slope. A tunnel was driven from bottom split to the Seven Foot, 108 feet. Rock airway driven from the Seven Foot to the Mammoth 3rd level, 113 feet. Made a 4-inch diamond drill hole 107 feet, on 3rd level, to tap water. An airway was driven from No. 50 Counter to the surface, for ventilation.

Packer No. 2 Colliery.—A rock airway was driven from Orchard to Little Orchard vein, 2nd level, 80 feet. Electric haulage installed on 2nd and 4th levels. Fireproof hospital was built outside.

Packer No. 3 Colliery.—Fireproof hospital built outside.

The Seven Foot fan-house was fireproofed.

Tunnel driven from the Skidmore to the Seven Foot, 2nd level, 92 feet.

Tunnel driven from the Seven Foot to the Skidmore, 5th level, 135 feet.

Tunnel driven from the Skidmore to the Seven Foot, 2nd level, 106 feet.

Packer No. 4 Colliery.—A tunnel was driven from the Mammoth to the Skidmore, 1st level, 50 feet.

A pump house was made in the rock between the Skidmore and Buck vein, 116 feet long, 20 feet wide, 16 feet high. A tunnel was driven from the North end of pump house to the rock slope, 163 feet; and 453 feet of sump made. A 25 by 44 by 15 by 48-inch Goyne duplex pump was installed, with a 14-inch column line to water reservoir on the surface.

A tunnel was driven from Seven Foot to Buck vein, 2nd level, 134 feet.

Boiler house remodeled; two 2,500 fresh water tanks erected; and a conveyor erected from breaker to rock bank.

Erected a brick furnace for burning old mine timber.

Packer No. 5 Colliery.—A tunnel was driven from the Seven Foot to the Orchard vein, East 2nd level, 742 feet; also rock airway driven Little Diamond East, 2nd level, 39 feet; rock airway driven from Little Buck to Buck vein, 2nd level, 35 feet; tunnel driven from Holmes to Orchard vein, East 2nd level, 80 feet; and tunnel driven from Buck to Little Buck, 72 feet.

A fireproof hospital was built outside at No. 1 Drift.

A steel and concrete breaker was erected during the year.

PHILADELPHIA AND READING COAL AND IRON COMPANY

Hammond Colliery.—A traffic tunnel from the Mammoth to the Diamond vein, 4th level was completed; distance 946 feet.

An air tunnel to the Diamond vein, from the Monkey gangway off East Mammoth gangway, 4th level, 35 feet east of above traffic tunnel, was completed; distance 895 feet.

No. 1 traffic tunnel, from East bottom split to Holmes vein, 4th level, was completed; distance 236 feet.

No. 1 air tunnel East to the Holmes vein, from the East bottom split Monkey gangway, 4th level, 35 feet east of No. 1 tunnel, was completed; distance 229 feet.

Bast Colliery.—A coal hoisting shaft was completed at a depth of 1,159 feet. The shaft has four compartments, each 7 feet by 12 feet 8 inches in the clear.

A tunnel to and around the coal shaft from the Buck gangway 3rd level, was driven 1,126 feet. An ash wash was installed at the boiler house.

Potts Colliery.—A slope on 25 degree pitch was driven in the top rock of Skidmore vein North basin, North dip, from 1st to 2nd level, 596 feet. A tunnel was driven at foot of rock slope, to connect with Mammoth West 2nd level, 176 feet.

A permanent pair of 24 by 36-inch hoisting engines have been erected at Diamond tender slope.

A traffic tunnel, 12 by 8 feet, was driven on 3rd level, from the Primrose to the Diamond vein; 395 feet.

An air tunnel, 8 by 8 feet, was driven from the Primrose to the Diamond vein, 3rd level, 395 feet.

A backswitch tunnel was driven off Diamond tender slope, 42 feet, on 2nd level; also backswitch tunnel off Diamond tender slope, 52 feet, on 3rd level.

The buildings at the colliery have been electrically lighted.

FIFTEENTH DISTRICT

NORTHUMBERLAND COUNTY

Mt. Carmel, Pa., February 24, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my Annual Report as Inspector of Mines for the Fifteenth Anthracite District, for the year ending December 31, 1914.

Respectfully submitted,

BENJAMIN I. EVANS, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	9
Number of mines,	30
Number of mines in operation,	30
Number of tons of coal shipped to market,	2,280,301
Number of tons used at mines for steam and heat,	323,362
Number of tons sold to local trade and used by employes,	50,051
Number of tons produced,	2,653,714
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	5,054
Number of persons employed outside,	1,967
Number of fatal accidents inside of mines,	25
Number of fatal accidents outside,	.....
Number of non-fatal accidents inside of mines,	27
Number of non-fatal accidents outside,	7
Number of tons of coal produced per fatal accident inside,	106,148
Number of tons produced per fatal accident outside,	.....
Number of tons produced per fatal accident inside and outside,	106,148
Number of persons employed per fatal accident inside,	202
Number of persons employed per fatal accident outside,	.....
Number of persons employed per fatal accident inside and outside,	281
Number of persons employed per non-fatal accident inside,	187
Number of persons employed per non-fatal accident outside,	281
Number of persons employed per non-fatal accident inside and outside,	206
Number of wives made widows,	19
Number of children made orphans,	22
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	17
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	28
Number of electric motors used outside,	.....
Number of gasoline locomotives used inside,	1
Number of gasoline locomotives used outside,	.....
Number of fans in use,	22
Number of furnaces in use,	.....
Number of gaseous mines in operation,	14
Number of non-gaseous mines in operation,	16
Number of new mines opened,	1
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company, ...	1,069,263
Susquehanna Coal Company, ...	948,880
Colonial Collieries Company, ...	264,566
Greenough Red Ash Coal Company, ...	277,882
Enterprise Coal Company, ...	93,123
Total, ...	2,653,714

Production by Counties

Northumberland, ...	2,653,714

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	5	.....	5	4	4	8	212,852	297,315	2,026	619	2,645	405	.....	506	154
Susquehanna Coal Co.,	17	.....	17	19	1	20	55,818	49,141	2,143	712	2,855	126	.....	112	712
Colonial Collieries Co.,	1	.....	1	2	1	3	264,566	132,283	410	240	650	410	.....	208	240
Greenough Red Ash Coal Co.,	1	.....	1	2	.....	2	277,482	138,941	378	231	609	378	.....	189	.....
Enterprise Coal Co.,	1	.....	1	.....	1	1	98,123	.....	97	165	262	97	.....	.....	165
Totals and averages,	25	.....	25	27	7	34	106,108	98,285	5,054	1,967	7,021	202	.....	187	281

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	1	....	....	....	....	....	1	...	....	1	....	3	12.00
Falls of slate,	2	1	....	....	....	....	....	....	....	2	....	....	5	20.00
Mine cars,	....	1	....	....	1	....	....	....	....	....	3	....	5	20.00
Explosions of gas,	....	....	....	....	3	....	....	....	1	....	....	....	4	16.00
Blasts, premature and otherwise,	....	....	....	....	....	1	....	1	....	....	....	....	2	8.00
Falling into slopes, etc.,	1	....	....	....	1	....	....	....	....	1	....	....	3	12.00
Struck by piece of slate	....	....	....	....	1	....	....	....	....	....	....	....	1	4.00
Struck by timber,	....	....	....	....	2	....	....	....	....	....	....	....	2	8.00
Totals,	3	3	....	....	8	1	....	2	1	3	4	....	25	100.00
Outside (No Accidents)														

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	1	1	1	2	....	....	3	1	....	....	1	10	37.03
Falls of slate,	....	....	....	....	....	1	....	....	....	....	....	1	2	7.40
Mine cars,	....	1	2	1	....	....	....	....	1	....	2	....	7	25.92
Explosions of gas,	....	....	....	....	....	....	2	....	1	....	....	....	3	11.11
Blasts, premature and otherwise,	....	....	1	....	....	....	....	....	....	....	....	....	1	3.70
Crushed at batteries,	...	....	....	1	....	....	....	....	....	....	....	....	1	3.71
Mules,	....	....	....	....	....	....	....	....	....	1	....	....	1	3.71
Struck by piece of coal,	....	....	....	....	....	....	....	....	....	1	....	....	1	3.71
Struck by piece of timber,	....	....	....	....	....	....	....	....	....	1	....	....	1	3.71
Totals,	....	2	4	3	2	1	2	3	3	3	2	2	27	100.00
Outside														
Cars,	1	....	1	1	....	1	....	....	....	....	....	....	4	57.14
Struck by piece of iron,	....	....	....	....	....	....	1	....	....	....	....	....	1	14.29
Struck by timber,	....	....	....	2	....	....	....	....	....	....	....	....	2	28.57
Totals,	1	....	1	3	....	1	1	....	....	....	....	....	7	100.00
Grand totals inside and outside,	1	2	5	6	2	2	3	3	3	3	2	2	34	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants, ...	....	1	....	....	....	....	....	....	....	....	....	....	1
Miners, ...	3	....	....	....	5	1	....	2	1	2	2	....	16
Miners' laborers, ...	....	2	....	....	....	....	....	....	....	1	....	....	3
Chainmen, ...	....	....	....	....	....	....	....	....	....	....	1	....	1
Motor conductors, ...	....	....	....	....	....	....	....	....	....	....	1	....	1
Loaders, ...	....	....	....	....	3	....	....	....	....	....	....	....	3
Totals, ...	3	3	....	....	8	1	....	2	1	3	4	....	25
Outside (No Accidents)													

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants, ...	....	....	....	1	....	....	....	....	....	....	....	....	1
Miners, ...	....	2	2	2	2	1	2	3	1	1	....	2	18
Miners' laborers, ...	....	....	....	....	....	....	....	....	2	....	1	....	3
Drivers and runners, ...	....	....	1	....	....	....	....	....	....	2	....	....	3
Bottom men, ...	....	....	....	....	....	....	....	....	....	....	1	....	1
Loaders, ...	....	....	1	....	....	....	....	....	....	....	....	....	1
Totals, ...	....	2	4	3	2	1	2	3	3	3	2	2	27
Outside													
Oilers, ...	....	....	....	....	....	....	1	....	....	....	....	....	1
Switchmen, ...	....	....	....	....	....	1	....	....	....	....	....	....	1
Doorboys, ...	....	....	1	....	....	....	....	....	....	....	....	....	1
Laborers, ...	1	....	....	3	....	....	....	....	....	....	....	....	4
Totals, ...	1	....	1	3	....	1	1	....	....	....	....	....	7
Grand totals inside and outside, ...	1	2	5	6	2	2	3	3	3	3	2	2	34

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	1	....	....	....	....	....	....	....	....	1	....	2
Irish,	....	....	....	....	....	....	....	1	....	....	....	....	1
Polish,	3	1	....	....	3	1	....	1	1	....	2	....	12
Italian,	....	....	....	....	....	....	....	....	....	2	1	....	3
Slavonian,	....	1	....	....	....	....	....	....	....	....	....	....	1
Austrian,	....	....	....	....	1	....	....	....	....	1	....	....	2
Russian,	....	....	....	....	4	....	....	....	....	....	....	....	4
Totals,	3	3	....	....	8	1	....	2	1	3	4	....	26

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	1	2	....	1	....	....	....	2	....	1	7
Welsh,	....	....	....	1	....	....	....	....	....	....	....	....	1
Irish,	....	....	....	1	....	....	....	....	....	....	....	....	1
Polish,	....	....	3	2	2	1	....	1	1	....	2	1	13
Italian,	....	1	....	....	....	....	....	....	....	....	....	....	1
Austrian,	....	....	....	....	....	....	2	2	1	....	....	....	5
Russian,	....	1	1	....	....	....	1	....	1	1	....	....	5
Greek,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	1	2	5	6	2	2	3	3	3	3	2	2	34

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.																
Locust Spring Colliery:																
Locust Spring, East, ...	Slope,...	Gaseous,...	Fan, ...	21	5.6	5.6	72	1.6			..	13	146,000	142,000	147,000	506
Locust Spring, East, ...	Shaft,...															
Locust Spring, Holmes, ..	Slope,.....	Non-gas....	Fan, ...	10	3.3	3.3	60	.8			..	2	25,600	22,460	25,800	
Locust Spring, Summit, ..	Slope,.....	Non-gas....	Fan, ...	16	5.5	5.5	84	1.3	Guibal,	Steam,....	..	8	42,275	40,763	43,876	
Locust Spring, West, ...	Slope,.....	Gaseous,...	Fan, ...	21	5	4.6	70	1.2			..	10	82,000	80,060	83,400	
Locust Gap, East, ...	Drift, ...	Non-gas....														
Locust Gap, West, ...	Slope,.....	Non-gas....	Fan, ...	16	4	3.6	75	.8			..	5	30,200	29,000	31,000	483
Locust Gap, Buck Mountain, ...	Slope,.....	Non-gas....	Fan, ...	12	4	3.6	84	1.3			..	8	42,275	40,000	43,760	
Alaska Colliery:																
Alaska No. 1, ...	Shaft,.....	Gaseous,...	Fan, ...	18	4.8	5	88	1.5	Guibal,	Steam,....	..	8	48,670	45,300	49,000	713
Alaska No. 2, ...	Shaft,.....	Gaseous,...	Fan, ...	18	7	6.5	87	1.4			..	8	49,700	45,750	50,000	
Reliance Colliery:																
Reliance No. 1, ...	Slope,.....	Gaseous,...	Fan, ...	18	5.6	5.6	72	1.3	Guibal,	Steam,....	..	9	53,270	50,120	54,000	325
Reliance No. 2, ...	Slope,.....	Gaseous,...	Fan, ...	18	5.6	5.6	84	1			..	4	41,164	40,000	42,890	
Susquehanna Coal Co.																
Pennsylvania Colliery:																
Pennsylvania No. 1, ...	Slope,...	Gaseous,...	Fan, ...	21	6.6	6.3	84	1.4	Mullen,	Steam,.....	..		81,300	76,090	85,000	818
Pennsylvania No. 4, ...				16	5.5	5.5	74	1					55,500	54,000	63,000	
Pennsylvania No. 5, ...				16	3.6	3.6	72	1.4					83,000	80,000	91,000	

Richards Colliery:																
Richards No. 1, ...	Slope,	Gaseous,...	Fan, ...	18	7.2	5.2	102	2.2	Vulcan,	Steam, ...	4	80,000	75,000	85,000	660
Richards No. 2, ...		Gaseous,...	Fan, ...	21	6.8	6.4	96	2.2	Vulcan,		6	89,000	87,000	90,360	
Richards No. 3, ...		Non-gas.,..	Fan, ...	16	4.5	4.5	90	1	Mullen,		8	73,000	70,000	75,000	
Scott Colliery:																
Scott, ...	Shaft,.....	Gaseous,...	Fan, ...	18	7	5.6	100	2.2	Mullen, ..	Steam,.....	10	185,000	179,000	186,567	665
Colonial Collieries Co.																
Natalie Colliery:																
Natalie No. 1, ...	Slope,...	Non-gas.,..	Fan, ...	14	4	4.4	75	.6	Mullen, .	Steam,.....	3	40,000	39,000	41,000	416
Natalie No. 2, ...				6	3	3.3	300	.4			1	10,000	9,070	10,500	
Natalie No. 3, ...				14	4	3.9	45	1.5			5	33,400	32,000	34,780	
Natalie No. 4,*				14	4	3.9	80	1.2			6	51,000	49,000	52,100	
Natalie No. 5, ...				12	3	3.5	95	1.1			3	21,000	18,500	21,500	
Greenough Red Ash Coal Co.																
Greenough Colliery:																
Greenough No. 4, ...	Shaft,.....	Non-gas.,..	Fan, ...	21	6.4	5.6	75	2.5	Mullen, .	Steam,.....	6	68,205	67,200	70,420	378
Greenough No. 9, ...	Shaft,.....	Non-gas.,..	Fan, ...	12	4	4	120	1.4			3	31,280	30,218	32,980	
Greenough No. 8, ...	Drift, ...	Non-gas.,..	Fan, ...	9	3.3	3	115	1			1	17,328	17,000	17,700	
Enterprise Coal Co.																
Enterprise Colliery:																
Enterprise, ...	Shaft,.....	Non-gas.,..	Fan, ...	16	4	5	90	1.2	Guibal, .	Steam,.....	3	32,000	30,000	33,000	97
Enterprise No. 3,†	Slope,.....	Non-gas.,..	Fan, ...	14	3.5	5	.....	.....							
Enterprise No. 10,†	Slope,.....	Non-gas.,..	Fan, ...	14	3.5	5	.....	.....							

*New mine.
†Flooded to quench a fire.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Locust Spring,	Northumberland,	W. J. Richards, General Manager.	Pottsville,	Reese Tasker,	Pottsville,	P. and R.
Locust Gap,						
Alaska,						
Reliance,						
Susquehanna Coal Co.						
Pennsylvania,	Northumberland,	Robert A. Quin,	Wilkes-Barre,	William R. Reinhardt	Shamokin,	Pennsylvania
Richards,						
Scott,						
Colonial Collieries Co.						
Natalie,	Northumberland,	Frank A. Hill,	Pottsville,	J. M. Holt,	Natalie,	P. and R.
Greenough Red Ash Coal Co.						
Greenough,	Northumberland,	Edward Brennan,	Shamokin,	Josiah Rhoads,	Shamokin,	Pennsylvania
Enterprise Coal Co.						
Enterprise,	Northumberland,	William L. Connell,	Scranton,	Edward X. Brennan,	Shamokin,	P. and R.

TABLE 2 —Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.													
Locust Spring,	Northumberland,	470,811	9,921	2,980	483,712	229	825	1	2	10,375	153,615	25,462	109
Locust Gap,		.....	65,124	.....	65,124	229	483	.....	1	100	131,981	.....	.....
Alaska,		273,407	28,510	76	301,993	229	874	3	3	98,400	176,829	1,575	62
Reliance,		167,108	32,066	19,260	218,434	229	463	1	2	10,475	154,651	.....	40
Totals,	.....	911,326	135,621	22,316	1,069,263	.....	2,645	5	8	119,350	617,076	27,037	211
Susquehanna Coal Co.													
Pennsylvania,	Northumberland,	334,565	34,855	15,593	385,013	219	1,055	3	13	49,350	26,474	149,125	66
Richards,		268,326	39,346	93	307,765	219	973	9	4	800	284,437	100	74
Scott,		225,940	26,030	4,132	256,102	219	827	5	3	42,750	18,880	101,075	53
Totals,	.....	828,831	100,231	19,818	948,880	.....	2,855	17	20	92,900	329,791	250,300	193
Colonial Collieries Co.													
Natalie,	Northumberland,	228,010	32,760	3,796	264,566	273	650	1	3	250	153,750	.....	40
Greenough Red Ash Coal Co.													
Greenough,	Northumberland,	246,627	27,375	3,880	277,882	268	609	1	2	79,125	75,890	.....	63
Enterprise Coal Co.													
Enterprise,	Northumberland,	65,507	27,375	241	93,123	241	262	1	1	44,925	9,500	.....	46
Grand totals,	.....	2,280,301	323,362	50,051	2,653,714	.....	7,021	25	34	336,550	1,186,007	277,337	553

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Northumberland,	....	.....	54	7,450	7,450	.....	7	.....	7	136	18,640	17	25,20[illegible]	6,577	2	7
Susquehanna Coal Co.,		....	.....	44	5,950	5,950	.....	6	.....	10	63	7,710	12	9,09[illegible]	3,73[illegible]	5	2
Colonial Collieries Co.,		....	.....	10	2,000	2,000	.....	4	.....	.....	11	1,650	8	2,600	2,00[illegible]	2	4
Greenough Red Ash Coal Co.		....	.....	9	1,600	1,600	1	.....	.....	5	14	830	4	4,000	4,00[illegible]	.....	.....
Enterprise Coal Co.,		....	.....	10	1,500	1,500	.....	.....	.....	6	12	1,328	4	6,543	6,54[illegible]	2	1
Totals,	.....	.....	.....	127	18,500	18,500	1	17	.....	28	236	30,158	45	47,442	22,86[illegible]	13	14

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.,	Northumberland,	5	3	26	881	236	130	22	21	189	513	2,026	....	7	24	97	67	17	13	394	619	2,645
Susquehanna Coal Co.,		4	7	34	937	377	135	25	38	48	538	2,143	1	4	53	103	239	....	22	290	712	2,855
Colonial Collieries Co.,		1	5	....	152	130	25	4	9	84	.....	410	1	1	12	43	29	7	2	145	240	650
Greenough Red Ash Coal Co.,		1	5	....	198	70	59	3	8	30	4	378	1	1	11	21	73	....	3	121	231	609
Enterprise Coal Co.,		1	1	....	53	15	7	....	3	17	.....	97	1	1	7	25	11	14	2	104	165	262
Totals,		12	21	60	2,221	828	356	54	79	368	1,055	5,054	4	14	107	289	419	38	42	1,054	1,967	7,021

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.,	Northumberland.	20	16	19	23	24	18	15	15	21	19	21	18	229
Susquehanna Coal Co.,		18	16	18	22	18	18	13	15	21	22	22	16	219
Colonial Collieries Co.,		24	18	23	23	23	25	24	24	24	23	20	22	273
Greenough Red Ash Coal Co.,		24	20	23	23	23	23	20	23	23	24	21	21	268
Enterprise Coal Co.,		20	20	20	20	20	20	20	20	20	20	20	21	241

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 14	Martin Miskill, ...	Polish, ...	Miner, ...	27	M.	1	....	Richards, ...	Northumberland.	Killed by being knocked down breast manway by a piece of coal.
15	Charles Zicofski, ...	Polish, ...	Miner, ...	35	M.	1	....	Pennsylvania,		Killed by fall of slate at face of breast.
	Charles McCavage, ...	Polish, ...	Miner, ...	30	M.	1	....			
Feb. 5	John Homoroski, ...	Slavonian, .	Laborer, ...	30	M.	1	....	Alaska, ...		Killed by fall of slate on gangway.
24	Stany Winters, ...	Polish, ...	Fire boss, ...	54	M.	1	2	Scott, ...		Killed by being squeezed between car and rib.
	Theodore Madara, ...	American,...	Laborer, ...	20	S.	....	....	Enterprise, ...		Killed by fall of coal in pumphouse.
May 12	Enoch Rutcoski, ...	Polish, ...	Loader, ...	19	S.	...	....	Scott, ...		Killed by being squeezed between car and rib on plane.
15	George Leshandack, ..	Austrian, ...	Miner, ...	32	M.	1	2	Richards, ...		Killed by being knocked down chute by a piece of slate.
	Ben Andrewscavitch,..	Russian, ...	Loader, ...	22	S.	....	....	Richards, ...		Killed by being struck by a piece of timber from air battery in chute. Explosion of gas blew out battery.
	Simon Zulich, ...	Russian, ...	Loader, ...	25	M.	1	1	Richards, ...		Killed by being struck by a piece of timber from air battery in chute. Explosion of gas blew out battery.
	Wally Gedridge, ...	Polish, ...	Miner, ...	54	M.	1	...	Richards, ...		Burned by explosion of gas. Eldridge and Rusko were told by fire boss that there was gas in their breast (No. 17) and they should put up brattice to clear it out. Revock, who worked in No. 16 breast had gone up to the return heading (unknown to the fire boss and the miners in No. 17 breast), and when the gas in No. 17 breast moved out Revock opened his safety lamp and ignited the gas. Gedridge died May 22. Rusko May 30 and Revock July 3.
	Joe Rusko, ...	Polish, ...	Miner, ...	27	M.	1	5			
	Wally Revock, ...	Russian, ...	Miner, ...	30	M.	1	4			
	Charles Pascavitch, ..	Russian, ...	Miner, ...	27	M.	1	....	Richards, ...		Killed by falling down breast manway.
June 5	Joe Kosavige, ...	Polish, ...	Miner, ...	49	M.	1	4	Alaska, ...		Killed by blast in heading.
Aug. 6	Henry G. Joyce, ...	Irish, ...	Miner, ...	55	M.	1	....	Locust Spring,		Killed by blast in heading.
19	Adam Matukitas, ...	Polish, ...	Miner, ...	48	M.	1	....	Reliance, ...		Killed by fall of coal off a pillar.
Sept. 1	George Kombatti, ...	Polish, ...	Miner, ...	46	M.	1	....	Scott, ...		Burned by explosion of gas. Died September 2.
Oct. 14	Philip Warran, ...	Austrian, ...	Miner, ...	42	M	1	4	Richards, ...		Killed by fall of slate at face of breast.

TABLE 4—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 20	Tony Devegena, ...	Italian, ...	Laborer, ...	33	M.	1	....	Natalie, ...	Northumberland.	Killed by fall of slate at face of pillar.
22	Tony Pupo, ...	Italian, ...	Miner, ...	35	M.	1	....	Greenough, ...		Killed by falling down breast manway.
Nov. 7	John Lucas, ...	Polish, ...	Miner, ...	54	M.	1	....	Scott, ...		Killed by being run over by trip of cars on slope.
12	Ben Matter, ...	American,...	Motor conductor,	18	S.	....	....	Scott, ...		Killed by being run over by trip of cars on gangway.
	Nick Ficko, ...	Italian, ...	Miner, ...	22	S.	....	....	Alaska, ...		Killed by fall of coal at face of breast.
19	Joseph Rinkus, ...	Polish, ...	Chain man, ...	17	S.	....	....	Pennsylvania, .		Killed by being struck by a trip of cars at bottom of slope.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 15	Theodore Stuodock, ..	Greek, ...	Laborer, ...	42	M.	Natalie, ...	Northumberland.	Leg broken by being bumped between cars. (Outside.)
Feb. 5	Peter Jarko, ...	Russian, ...	Miner, ...	41	M.	Pennsylvania, ...		Shoulder broken. Squeezed between buggy and prop on gangway.
25	Anthony Merark, ...	Italian, ...	Miner, ...	36	M.	Alaska, ...		Back broken by fall of coal at face of breast.
March 5	George Orelofski, ...	Polish, ...	Loader, ...	42	S.	Pennsylvania, ...		Leg broken by being bumped between cars at bottom of slope.
18	Anthony Sabolefski, ..	Russian, ...	Miner, ...	40	M.	Pennsylvania, ...		Leg broken by fall of coal at face of breast.
23	Joe Berzeski, ...	Polish, ...	Miner, ...	22	S.	Pennsylvania, ...		Injured by blast at face of breast. He cut the squib.
	John Petrofski, ...	Polish, ...	Driver, ...	23	S.	Pennsylvania, ...		Skull fractured. Struck by car at bottom of slope.
25	Irvin Hummel, ...	American,..	Doorboy, ...	17	S.	Locust Spring, ...		Both feet injured by being thrown under car. (Outside.)
April 1	Lewis Williams, ...	Welsh, ...	Fire-boss, ...	58	M.	Richards, ...		Leg broken. Empty car came down the slope and struck him.
8	Charles Klawitter, ...	American,...	Laborer, ...	24	S.	Richards, ...		Leg broken. A piece of timber rolled on it. (Outside.)
20	William Snyder, ...	American,...	Miner, ...	25	M.	Pennsylvania, ...		Leg broken by fall of coal at face of breast.
21	Joe Delaney, ...	Irish, ...	Miner, ...	39	S.	Locust Gap, ...		Leg broken by a rush of coal at battery in an old breast.
28	Thomas Parsick, ...	Polish, ...	Laborer, ...	32	S.	Reliance, ...		Leg broken. A stick of timber rolled off a car and struck his leg. (Outside.)
	Mike Herdock, ...	Polish, ...	Laborer, ...	35	M.	Alaska, ...		Legs broken. Dirt bank dumper rolled over on him. (Outside.)
May 5	Louis Sosnoski, ...	Polish, ...	Miner, ...	56	M.	Pennsylvania, ...		Leg broken by fall of coal off rib at face of breast.
12	Joe Crovetski, ...	Polish, ...	Miner, ...	40	S.	Greenough, ...		Leg broken by fall of coal at face of breast.
June 4	Fred Camp, ...	American,...	Miner, ...	27	M.	Locust Spring, ...		Leg broken by fall of slate at face of breast.
16	Mike Habarack, ...	Polish, ...	Switchman, ...	22	S.	Alaska, ...		Instep crushed by cars running over his foot. (Outside.)

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
July 15	John Gumbrassi,	Austrian,	Miner,	28	S.	Pennsylvania,	Northumberland.	Burned by explosion of gas at face of breast.
	Joseph Poloto,	Austrian,	Miner,	27	S.	Pennsylvania,		Burned by explosion of gas at face of breast.
29	John Pollish,	Russian,	Oiler,	21	S.	Enterprise,		Leg broken by being struck by a piece of iron from elevator. (Outside.)
Aug. 5	Stany Crack,	Polish,	Miner,	38	M.	Scott,		Leg broken by fall of coal at face of breast.
11	Mike Slatko,	Austrian,	Miner,	27	M.	Richards,		Thigh broken by fall of coal at face of breast.
19	Adam Wassel,	Austrian,	Miner,	39	M.	Richards,		Leg broken by fall of coal at face of breast.
Sept. 1	John Komiatti,	Polish,	Laborer,	26	S.	Scott,		Burned by explosion of gas in breast.
14	Mike Timko,	Russian,	Laborer,	22	S.	Natalie,		Thigh dislocated. Caught between car and face of gangway.
17	Steve Edwards,	Austrian,	Miner,	52	M.	Scott,		Ribs broken by fall of coal at face of breast.
Oct. 9	Daniel Brocious,	American,	Miner,	44	M.	Pennsylvania,		Eye injured. A piece of coal flew from a hammer into his eye.
13	Walter Cress,	American,	Runner,	16	S.	Reliance,		Severely injured by being kicked by a mule in the abdomen.
	John Lupeck,	Russian,	Driver,	26	S.	Natalie,		Knee cap fractured. A prop fell on his leg at face of gangway.
Nov. 19	Mike Gundock,	Polish,	Bottomman,	26	S.	Pennsylvania,		Leg broken by being struck by car at bottom of slope.
	George Orclofski,	Polish,	Laborer,	42	S.	Pennsylvania,		Injured by cars. Side bar broke and cars came back on slope.
Dec. 12	William Coloshinski,	Polish,	Miner,	39	S.	Pennsylvania,		Leg broken by fall of top coal at face of breast.
24	Charles Fessler,	American,	Miner,	43	S.	Greenough,		Two ribs broken and head lacerated by fall of slate at face of breast.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Locust Spring Colliery.—Locust Spring Shaft, No. 1 Slope, West Slope. Ventilation, drainage and condition as to safety, good.

Locust Gap Colliery.—East Slope, West Slope, Buck Mountain Slope, Drift. Ventilation, drainage, and safety conditions, good.

Alaska and Reliance Collieries.—Ventilation, drainage, and condition as to safety, good.

SUSQUEHANNA COAL COMPANY

Pennsylvania Colliery.—Nos. 1 and 5 Slopes. Ventilation, drainage, and condition as to safety, good.

Richards Colliery.—Nos. 1 and 4 Slopes. Ventilation, drainage, and safety conditions, good.

Scott Colliery.—Ventilation, drainage and safety conditions, good.

COLONIAL COLLIERIES COMPANY

Natalie Colliery.—Lykens Nos. 1 and 2 Slopes. Ventilation, drainage, and safety conditions, good.

Nos. 3 and 4 Slopes.—Ventilation and safety conditions, good. Drainage fair.

GREENOUGH RED ASH COAL COMPANY

Greenough Colliery.—Ventilation, drainage, and condition as to safety, good.

ENTERPRISE COAL COMPANY

Enterprise Colliery.—Ventilation, drainage, and condition as to safety, fair.

IMPROVEMENTS

SUSQUEHANNA COAL COMPANY

Pennsylvania Colliery.—Two parallel air holes were driven in No. 4 seam South dip, No. 5 slope west, a distance of 540 feet to anticlinal, to connect the North and South dip workings in No. 4 seam.

Transmission line—Power from Scott.

Electric haulage.—One 8-ton General Electric locomotive put into service in No. 4 slope west, No. 11 seam south dip, on a haul of 7,500 feet.

No. 1 slope tunnel shaft level, No. 9 to No. 9½ seam, was driven a distance of 26 feet.

No. 2 slope tunnel, No. 10 to No. 9¾ seam, was driven a distance of 25 feet.

An air tunnel was driven from No. 9 to 9½ seam, a distance of 50 feet.

A slant tunnel was driven on a pitch of 30 degrees, a distance of 85 feet, from No. 10 to No. 10½ seam, in No. 5 slope level, for air connections.

Richards Colliery.—A tunnel was finished at a distance of 176 feet cutting the No. 4 seam North dip, driven from No. 6 seam North dip. The East No. 4 seam gangway off this tunnel was driven 1,109 feet, to make connections with Water Level tunnel, which was driven in 2,565 feet during the year and has several hundred feet yet to be driven, cutting the No. 4 seam in basin, which will act as a drainage tunnel as well as cut the Lykens Valley seam of coal.

Tunnel was driven 110 feet from the No. 10 seam South dip to No. 11 seam South dip in No. 1 slope level west.

A new traveling way was made from No. 6 slope level to No. 1 slope level, making a good second outlet in addition to the second opening which was already made.

Concreted 110 feet of the mouth of No. 1 slope, top and sides, making absolutely safe for the life of the colliery.

Transmission line—Power from Scott.

Installed 10-inch steam line running from boiler house to and down a 13-inch hole to pumps on No. 1 slope level; depth of hole 331 feet; total length of pipe line 680 feet.

Power plant—Installed one 325 H. P. 2,300 volts 3-phase induction motor, connected to a 200 K. W. D. C. generator, 300 volts (Ridgway).

Scott Colliery.—A new fan was placed on top of new air shaft driven up from the anticlinal in No. 8 seam dividing Hickory Ridge and Scott collieries. The fan is a Vulcan type, 10 feet in diameter, and has 30 blades 84 by 16-inches, and 10 blades 84 by 18 inches. The speed of fan is 168 revolutions per minute.

An air tunnel was driven from No. 9½ seam, a distance of 145 feet, to foot of air shaft.

A slope was sunk in No. 6 seam a distance of 487 feet on a dip of 12 degrees.

A traveling way was driven a distance of 800 feet from the No. 4 seam bottom lift in Shaft to the No. 4 seam level on the first lift, which makes a second outlet for men that can be traveled to the surface.

On the outside a combination hospital and ambulance house was put into service, fitted up to meet any emergency.

Electric haulage—Two 8-ton General Electric locomotives were installed on a haul of 7,600 feet.

Transmission line. Exhaust line to power plant—Power from Scott Colliery. Bath house completed.

Power plant—Installed one engine 26 by 32 inches, 750 H. P., connected to 2,300 volt generator 625 A. C. K. V. A.; one Exciter engine 10 by 12, 85 H. P., connected to a D. C. generator 140 volts, 60 K. W.; also one 325 H. P. 2,300 volt phase induction motor, connected to a 200 K. W. D. C. generator 300 volts (Ridgway).

SIXTEENTH DISTRICT

NORTHUMBERLAND COUNTY

Shamokin, Pa., February 25, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my Annual Report as Inspector of Mines for the Sixteenth Anthracite District, for the year ending December 31, 1914.

Respectfully submitted,

P. J. FRIEL, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	14
Number of mines,	41
Number of mines in operation,	41
Number of tons coal shipped to market,	2,563,588
Number of tons used at mines for steam and heat,	338,438
Number of tons sold to local trade and used by employes,	77,911
Number of tons produced,	2,979,937
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	5,506
Number of persons employed outside,	2,086
Number of fatal accidents inside of mines,	29
Number of fatal accidents outside,	1
Number of non-fatal accidents inside of mines,	42
Number of non-fatal accidents outside,	4
Number of tons of coal produced per fatal accident inside,	102,756
Number of tons produced per fatal accident outside,	2,979,937
Number of tons produced per fatal accident inside and outside,	99,331
Number of persons employed per fatal accident inside,	190
Number of persons employed per fatal accident outside,	2,086
Number of persons employed per fatal accident inside and outside,	253
Number of persons employed per non-fatal accident inside,	131
Number of persons employed per non-fatal accident outside,	522
Number of persons employed per non-fatal accident inside and outside,	165
Number of wives made widows,	21
Number of children made orphans,	55
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	24
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	12
Number of electric motors used outside,	3
Number of gasoline locomotives used inside,	1
Number of gasoline locomotives used outside,	.....
Number of fans in use,	43
Number of furnaces in use,	.....
Number of gaseous mines in operation,	25
Number of non-gaseous mines in operation,	16
Number of new mines opened,	4
Number of old mines abandoned,	5

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,362,888
Susquehanna Coal Company,	925,879
Shipman Koal Company,	237,604
Excelsior Coal Company,	234,086
Buck Ridge Coal Mining Company,	126,646
Trevorton Colliery Company,	92,834
Total,	2,979,937

Production by Counties

Northumberland,	2,979,937

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	11	1	12	8	1	9	123,899	170,361	2,275	891	3,146	205	891	282	891
Susquehanna Coal Co.,	9	.....	9	16	3	19	102,875	57,867	1,789	790	2,579	199	.....	112	263
Shippen Coal Co.,	4	.....	4	6	.....	6	59,401	39,601	469	128	597	117	.....	78	.....
Excelsior Coal Co.,	2	.....	2	4	.....	4	117,043	58,521	454	111	565	227	.....	113	.....
Buck Ridge Coal Mining Co.,	3	.....	3	5	.....	5	42,215	25,329	360	95	455	120	.....	72	.....
Trevorton Colliery Co.,	.....	.....	.....	3	.....	3	.....	30,945	179	71	250	.....	.....	60	.....
Totals and averages,	29	1	30	42	4	46	102,756	70,951	5,506	2,086	7,592	190	2,088	131	522

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	1	1	....	....	....	....	....	1	....	....	3	10.34
Falls of slate,	1	....	....	....	....	....	....	....	....	....	1	1	3	10.34
Falls of roof,	....	1	....	....	1	1	....	....	2	....	....	....	5	17.24
Explosions of gas,	....	....	....	....	....	1	1	....	....	....	....	....	2	6.90
Suffocation by gas, etc.,	....	....	....	....	1	....	....	....	....	....	....	....	1	3.45
Explosions of powder and dynamite,	....	....	....	....	....	....	....	....	....	....	....	1	1	3.45
Blasts, premature and otherwise,	....	...	1	....	1	....	....	....	....	....	1	1	4	13.79
Falling into slopes, etc.,	....	1	....	....	1	1	1	1	1	....	....	....	6	20.69
Rush of coal,	....	....	....	....	....	1	....	....	....	....	....	....	1	3.45
Rush of gob,	....	....	....	....	....	....	....	....	....	....	1	....	1	3.45
Struck by chute,	....	....	....	1	1	....	....	....	....	....	....	....	2	6.90
Totals,	1	2	2	2	5	4	2	1	3	1	3	3	29	100.00
Outside														
Machinery,	....	....	....	....	....	....	....	....	....	....	1	....	1	100.00
Totals,	....	....	....	....	....	....	....	....	....	....	1	....	1	100.00
Grand totals inside and outside,	1	2	2	2	5	4	2	1	3	1	4	3	30	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	1	1	....	....	....	2	1	....	1	1	....	....	7	16.67
Falls of slate,	2	....	....	....	....	2	....	....	....	....	2	1	7	16.67
Falls of roof,	....	....	1	....	....	....	....	....	1	1	....	....	3	7.14
Mine cars,	....	....	....	....	....	....	....	....	....	1	1	....	2	4.76
Explosions of gas,	....	....	....	....	....	....	....	1	....	1	2	....	4	9.52
Blasts, premature and otherwise,	....	....	3	1	1	1	....	....	....	....	....	....	6	14.29
Mules,	....	....	....	....	....	....	....	....	....	....	1	....	1	2.38
Struck by timber,	1	....	....	1	....	....	....	....	1	....	....	....	3	7.14
Struck by piece of coal,	....	....	....	....	....	....	....	....	....	....	1	...	1	2.38
Struck by piece of rock,	....	....	....	....	....	....	1	....	....	....	1	1	3	7.14
By falling,	....	....	....	....	....	....	....	....	....	1	....	1	2	4.76
Caught by cage,	....	....	....	....	....	....	....	....	....	1	....	....	1	2.38
Struck by rope,	....	....	....	1	....	....	....	....	....	....	....	1	2	4.76
Totals,	4	1	4	3	1	5	2	1	3	6	8	4	42	100.00
Outside														
Machinery,	1	....	....	....	1	....	....	....	....	....	....	....	2	50.00
Mules,	....	1	....	....	....	....	....	....	....	....	....	....	1	25.00
By falling,	....	....	....	....	1	....	....	....	....	....	....	....	1	25.00
Totals,	1	1	....	....	2	....	....	....	....	....	....	....	4	100.00
Grand totals inside and outside,	5	2	4	3	3	5	2	1	3	6	8	4	46	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants,	....	....	....	....	....	1	....	....	1	....	....	....	2
Miners,	1	1	2	1	4	2	2	1	2	1	2	3	22
Miners' laborers,	....	1	....	....	....	....	....	....	....	....	1	....	2
Drivers and runners,	....	....	....	1	....	....	....	....	....	....	....	....	1
Doorboys and helpers,	....	....	....	....	1	....	....	....	....	....	....	....	1
Loaders,	....	....	....	....	....	1	....	....	....	....	....	....	1
Totals,	1	2	2	2	5	4	2	1	3	1	3	3	29
Outside													
Blacksmiths and carpenters,	....	....	....	....	....	....	....	....	....	....	1	....	1
Totals,	....	....	....	....	....	....	....	....	....	....	1	....	1
Grand totals inside and outside,	1	2	2	2	5	4	2	1	3	1	4	3	30

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants,	....	....	....	....	....	....	....	....	....	1	....	....	1
Miners	2	1	4	1	....	3	1	1	2	2	4	1	22
Miners' laborers,	1	....	....	....	1	1	....	....	....	....	2	....	5
Drivers and runners,	....	....	....	....	....	....	....	....	....	1	1	1	3
Company men,	....	....	....	....	....	1	....	....	....	....	....	....	1
Loaders,	1	....	....	....	....	....	1	....	1	....	1	....	4
Repairmen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Timbermen,	....	....	....	1	....	....	....	....	....	1	....	....	2
Tonmen,	....	....	....	1	....	....	....	....	....	....	....	1	2
Bratticemen,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	4	1	4	3	1	5	2	1	3	6	8	4	42
Outside													
Jig runners,	1	....	....	....	....	....	....	....	....	....	....	....	1
Drivers,	....	1	....	....	....	....	....	....	....	....	....	....	1
Repairmen,	....	....	....	....	1	....	....	....	....	....	....	....	1
Laborers,	....	....	....	....	1	....	....	....	....	....	....	....	1
Totals,	1	1	....	....	2	....	....	....	....	....	....	....	4
Grand totals inside and outside,	5	2	4	3	3	5	2	1	3	6	8	4	46

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	1	....	1	....	1	....	1	2	1	2	2	11
Polish,	1	1	1	1	4	3	1	....	....	....	1	1	13
Slavonian,	....	....	....	....	....	1	....	....	....	....	....	....	1
Lithuanian,	....	....	....	....	....	....	....	....	1	....	....	....	1
Austrian,	....	....	....	....	1	....	....	....	....	....	1	....	2
Russian,	....	....	1	....	....	....	1	....	....	....	....	....	2
Totals,	1	2	2	2	5	4	2	1	3	1	4	3	30

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	2	2	....	2	2	....	....	....	2	3	3	2	18
English,	1	....	....	....	....	....	....	....	....	....	....	....	1
Welsh,	....	....	....	....	....	....	....	....	....	....	....	1	1
German,	....	....	1	....	....	....	....	....	....	....	....	....	1
Polish,	2	....	2	1	1	3	1	1	....	2	3	1	17
Hungarian,	....	....	....	....	....	....	....	....	....	....	1	....	1
Italian,	....	....	....	....	....	1	....	....	....	....	....	....	1
Slavonian,	....	....	1	....	....	....	....	....	....	....	....	....	1
Lithuanian,	....	....	....	....	....	....	1	....	....	....	....	....	1
Russian,	....	....	....	....	....	1	....	....	1	1	1	....	4
Totals,	5	2	4	3	3	5	2	1	3	6	8	4	46

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
North Franklin Colliery:															
North Franklin No. 1,	Drift,	Non-gas...	Fan,	18	6	5.4	75	0.7		Electricity,	8	57,800	44,100	59,600	477
North Franklin No. 2,	Slope,	Non-gas...	Fan,	18	6	5.5	82	2.1	Guibal,	Steam,	7	52,400	41,100	53,800	
North Franklin No. 3,	Slope,	Gaseous,	Fan,	15	5.1	4.5	60	1.		Electricity,	2	23,400	21,600	24,100	
Bear Valley Colliery:															
Bear Valley No. 1,	Shaft,	Gaseous,	Fan,	18	5.9	4.9	80	0.8			7	45,000	41,000	46,600	446
Bear Valley No. 2,	Shaft,	Gaseous,	Fan,	12	4	3.6	80	1.	Guibal,	Steam,	2	20,100	17,800	20,800	
Bear Valley No. 3,	Drift,	Non-gas...	Fan,	15	4	5	90	0.6		Electricity,	6	37,000	32,000	37,900	
Bear Valley No. 4,	Drift,	Non-gas...	Natural,	....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	.....
Bear Valley No. 5,*	Slope,	Non-gas...	Natural,	....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	.....
Burnside Colliery:															
Burnside No. 1,	Drift,	Non-gas...	Fan,	15	4.2	5.6	90	1.			4	49,500	36,700	41,500	477
Burnside No. 2,	Shaft,	Gaseous,	2 Fans,	15	4	5	90	1.1	Guibal,	Steam,	6	42,000	38,500	42,800	
				15	4	5	90	1.			4	41,000	37,400	42,400	
Stirling Colliery:															
Stirling No. 1,	Slope,	Gaseous,	2 Fans,	21	7.2	6	60	1.3	Guibal,	Steam,	11	76,000	70,600	77,800	270
				15	4.6	4.3	80	1.			5	29,000	26,400	31,400	
Henry Clay Colliery:															
Henry Clay No. 1,	Shaft,	Gaseous,	2 Fans,	21	7	6.3	68	1.4	Guibal,	Steam,	7	51,900	47,900	52,400	285
				15	4	5	120	1.2			8	43,100	40,600	44,000	

*New mine.

Big Mountain Colliery:															
Big Mountain No. 1, ...	Slope, ...	Gaseous, ..	Fan, ...	18	6	5.5	80	0.8	Guibal, ...	Steam, ...	3	31,200	28,400	32,400	300
Big Mountain No. 2, ...	Slope, ...	Gaseous, ..	2 Fans, ...	18	6	5.5	70	0.8			4	23,600	21,400	24,800	
				12	4	3.6	120	1.2			5	25,700	23,800	26,900	
Big Mountain No. 3,† ...	Drift, ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	.....
Susquehanna Coal Co.															
Cameron Colliery:															
Cameron No. 1, ...	Slope, ...	Gaseous, ..	Fan, ...	20	6	5.6	75	1.4		Steam, ...	4	45,300	38,500	46,400	794
Cameron No. 2, ...	Drift, ...	Gaseous, ..	Fan, ...	16	6	5.2	73	1.4		Electricity, .	8	39,400	36,000	40,100	
Cameron No. 3, ...	Slope, ...	Gaseous, ..	Fan, ...	18	7	5.3	100	2.4			8	91,500	85,600	92,500	
Cameron No. 4, ...	Slope, ...	Gaseous, ..	Fan, ...	16	6	5.7	75	1.4	Guibal, ...	Steam, ...	5	43,600	39,600	44,100	
Cameron No. 5, ...	Shaft, ...	Gaseous, ..	2 Fans, ...	16	6	5.2	83	1.6			6	44,500	39,800	45,700	
				16	6	5.3	96	2.4			7	53,600	48,700	54,700	
Luke Fidler Colliery:															
Luke Fidler No. 1, ...	Shaft, ...	Gaseous, .	Fan, ...	18	7	5	62	1.4			3	31,800	29,200	34,000	408
Luke Fidler No. 2, ...	Shaft, ...	Gaseous, ..	2 Fans, ...	18	7	5.2	92	1.3	Guibal, ...	Steam, ...	3	68,200	64,500	72,000	
				14	6	5	80	1.1			2	57,400	55,400	59,000	
Luke Fidler No. 3, ...	Drift, ...	Non-gas.,	Fan, ...	10	4.4	2	67	0.3	Sturtevant, ..		1	29,400	27,300	31,000	
Hickory Ridge Colliery:															
Hickory Ridge No. 1, ...	Slope, ...	Gaseous, ..	Fan, ...	18	7	5.6	70	0.8	Guibal, ...	Steam, ...	4	76,000	66,000	78,000	587
Hickory Ridge No. 2, ...	Slope, ...	Gaseous, ..	Fan, ...	10	5	2.6	165	2.		Electricity, .	6	120,000	110,000	122,000	
Hickory Swamp Colliery:															
Hickory Swamp No. 1, ..	Slope, ...	Gaseous, ..	2 Fans, ...	16	5.5	4.5	110	2.4	Guibal, ...	Steam, ...	3	47,300	40,000	48,500	
				14	3.6	4.1	105	0.8			1	22,600	18,400	23,200	
Shipman Koal Co.															
Colbert Colliery:															
Colbert No. 1, ...	Shaft, ...	Gaseous, ..	Fan, ...	16	5	4	90	0.8	Guibal, ...	Steam, ...	6	54,000	40,000	55,000	469
Colbert No. 2, ...	Drift, ...	Gaseous, ..	Fan, ...	16	5	4	75	0.5			8	56,000	54,000	59,000	
Excelsior Coal Co.															
Corbin Colliery:															
Corbin No. 1, ...	Drift, ...	Non-gas.,													
Corbin No. 2, ...	Drift, ...	Non-gas.,	Fan, ...	16	5	4	85	1.7			4	126,000	119,400	128,000	
Corbin No. 3, ...	Drift, ...	Non-gas.,													
Corbin No. 4, ...	Slope, ...	Gaseous, ..	Fan, ...	12	5	5	90	2.1	Beadle, ...	Steam, ...	2	23,000	21,600	25,000	454
Corbin No. 5, ...	Drift, ...	Non-gas.,													
Corbin No. 6,*	Drift, ...	Non-gas.,	Fan, ...	10	3	3.6	90	1.5			2	21,000	19,100	23,000	
Corbin No. 7,*	Drift, ...	Non-gas.,													
Corbin No. 8, ...	Slope, ...	Gaseous, ..	Fan, ...	12	5	5	90	1.9			2	19,000	17,000	20,500	
Buck Ridge Coal Mining Co.															
Buck Ridge Colliery:															
Buck Ridge No. 1, ...	Slope, ...	Gaseous, ..	Fan, ...	12	3.6	3.6	90	0.8	Pollock, ...		4	18,050	17,300	18,875	360
Buck Ridge No. 2, ...	Slope, ...	Gaseous, ..	2 Fans, ...	14	4.6	4.6	84	0.5			4	30,100	30,000	30,800	
				18	5.5	5	68	0.5	Guibal, ...	Steam, ..	8	45,200	44,600	46,700	
Buck Ridge No. 3, ...	Slope, ...	Gaseous, ..	2 Fans, ...	12	3.6	3.6	65	0.5			2	14,225	14,000	14,725	
				6	2	2	200	0.5	Stine, ...		1	6,340	6,000	6,535	

†Abandoned.
*New mine.

TABLE I.—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Trevorton Colliery Co.															
Katherine Colliery:															
Katherine No. 1, ...	Drift, ...	Non-gas.,..	Fan, ...	7	2.6	3.6	360	1.1	Stine, ...	Steam,....	3	22,000	13,500	23,100	179
Katherine No. 2, ...	Drift, ...	Non-gas.,..	Fan, ...	7	2	3.6	270	1			2	24,000	17,200	25,000	
Katherine No. 3, ...	Drift, ...	Non-gas.,..													

Two non-gaseous mines ventilated by natural ventilation; no air measurements taken.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co. North Franklin, Bear Valley, Burnside, Stirling, Henry Clay, Big Mountain,	Northumberland,	G. B. Hadesty,	Pottsville,	Reese Tasker, Mining Supt. P. F. Brennan, Division Supt. John C. Brown, Inside District. Supt. J. D. Knapp, Outside District Supt.	Pottsville, Shamokin, Shamokin, Shamokin,	P. and R.
Susquehanna Coal Co. Cameron, Luke Fidler, Hickory Ridge, Hickory Swamp, Hickory Swamp Washery	Northumberland,	Robert A. Quin,	Wilkes-Barre,	W. R. Reinhardt,	Shamokin,	Pennsylvania
Shipman Koal Co. Colbert,	Northumberland,	T. H. Price,	Wilkes-Barre,	D. T. Campbell,	Shamokin,	Pennsylvania
Excelsior Coal Co. Corbin,	Northumberland,			George W. Robertson,	Shamokin,	P. and R.
Buck Ridge Coal Mining Co. Buck Ridge,	Northumberland,	Telford Lewis,	Johnstown,	Raymond Lewis,	Shamokin,	P. and R. and Pennsylvania
Trevorton Colliery Co. Katherine,	Northumberland,			Clarence T. Starr,	Shamokin,	P. and R.

TABLE 2.- Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.													
North Franklin,	Northumberland,.	319,626	33,396	7,659	359,681	226	689	4	.....	132,975	60,223	.....	53
Bear Valley,		249,805	27,813	959	278,577	228	676	2	2	133,725	63,002	.....	57
Burnside,		350,553	54,966	12,828	418,347	230	687	1	5	173,300	40,195	.....	95
Stirling,							295	.....	.....	89,700	6,866	.....	
Henry Clay,		249,180	33,024	24,079	306,283	228	449	3	2	80,150	10,165	13,321	82
Big Mountain,							350	2	.....	77,150	26,195	.....	
Totals,	.....	1,169,164	148,199	45,525	1,362,888	.....	3,146	12	9	686,000	206,646	13,321	287
Susquehanna Coal Co.													
Cameron,	Northumberland,.	331,667	43,631	18,198	393,486	219	1,087	7	8	115,750	36,784	13,725	98
Luke Fidler,		161,390	34,174	7,877	203,441	207	609	.....	4	59,425	14,343	957	67
Hickory Ridge,		252,502	30,580	1,063	284,145	246	852	2	7	100,325	72,993	1,625	79
Hickory Swamp,													
		745,559	108,375	27,138	881,072	.....	2,548	9	19	275,500	124,120	16,307	244
Hickory Swamp Washery,	Northumberland,.	30,797	14,010	.....	44,807	205	31	.....	.....	.....	.....	.....	.....
Totals,	.....	776,356	122,385	27,138	925,879	.....	2,579	9	19	275,500	124,120	16,307	244
Shipman Koal Co.													
Colbert,	Northumberland,.	217,335	19,200	1,069	237,604	288	597	4	6	93,775	64,550	.....	49

Corbin, Excelsior Coal Co.	Northumberland,	208,685	25,000	401	234,086	271	565	2	4	233,750	15,975	.....	57
Buck Ridge Coal Mining Co.													
Buck Ridge,	Northumberland,	108,995	16,040	2,601	126,646	264	455	3	5	500	68,200	9,450	25
Trevorton Colliery Co.													
Katherine,	Northumberland,	81,943	7,914	1,177	92,834	191	250	.....	3	6,250	3,745	.....	25
Grand totals,	.....	2,503,588	338,48	77,911	2,979,987	.....	7,592	30	46	1,295,775	483,236	39,078	687

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Northumberland,	....	.....	65	8,125	8,125	.....	7	.....	10	152	19,543	21	28,901	8,672	6	6
Susquehanna Coal Co.,		....	.....	52	7,002	7,002	.....	10	.....	5	90	8,910	20	11,520	5,797	3	6
Shipman Koal Co.,		....	.....	10	1,275	1,275	.....	2	.....	.....	22	1,095	3	1,536	970	1	2
Excelsior Coal Co.,		20	640	4	250	890	.....	4	.....	.....	9	275	2	468	300	.....	.....
Buck Ridge Coal Mining Co.,		....	.....	10	1,430	1,430	.....	2	.....	.....	20	707	4	1,600	915	.....	2
Trevorton Colliery Co.,		....	.....	3	900	900	1	.....	.....	.....	8	480	2	300	300	.....	1
Totals,		20	640	144	18,982	19,622	1	25	.....	15	301	31,010	52	44,325	16,954	10	17

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside												Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.,	Northumberland	7	4	35	906	391	133	17	16	199	547	2,255	....	8	28	106	85	44	16	604	891	3,146
Susquehanna Coal Co.,		4	10	37	706	284	110	29	48	54	507	1,789	....	4	41	115	235	....	28	367	790	2,579
Shipman Koal Co., ...		2	....	9	230	69	32	5	4	107	11	469	1	1	13	11	10	2	3	87	128	597
Excelsior Coal Co., ..		1	3	3	227	94	38	....	3	51	24	454	1	1	11	17	10	10	2	59	111	565
Buck Ridge Coal Mining Co., ...		1	....	9	200	45	22	1	5	76	1	360	1	1	5	21	15	4	1	47	95	455
Trevorton Colliery Co.,		1	....	4	90	23	19	2	....	40	.....	179	1	2	4	9	17	5	2	31	71	250
Totals, ...	.....	16	17	97	2,369	906	354	54	76	527	1,090	5,506	4	17	102	279	372	65	52	1,195	2,086	7,592

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.,	Northumberland	20	16	18	23	24	19	14	16	20	19	21	18	228
Susquehanna Coal Co.,		18	14	19	21	22	17	11	14	20	21	21	16	214
Shipman Koal Co.,		26	23	24	23	24	23	22	24	26	26	24	24	288
Excelsior Coal Co.,		22	23	23	21	23	23	22	20	23	25	23	23	271
Buck Ridge Coal Mining Co.,		24	20	21	22	24	25	11	23	24	21	24	25	264
Trevorton Colliery Co.,		22	22	20	18	11	9	14	10	20	16	15	14	191

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 5	Frank Robel, ...	Polish,.....	Miner, ...	52	M.	1	3	Henry Clay, ..		Killed by fall of slate at face of breast.
Feb. 2	Edward Etzel, ...	American,..	Laborer, ...	31	M.	1	....	Cameron, ...		Killed by fall of rock at face of slope.
26	Joseph Brozowskie, ..	Polish,.....	Miner, ...	22	S.	....	....	Cameron, ...		Killed by falling down manway.
March 12	Charles Babbin, ...	Russian, ...	Miner, ...	28	S.	....	....	Colbert, ...		Back broken by fall of coal at face of breast. Died April 1.
13	John Marafskie, ...	Polish,.....	Miner, ...	27	M.	1	3	Hickory Ridge,		Killed at face of breast by explosion of blast that he thought had missed fire.
April 28	Wilson Hall, ...	American,..	Driver, ...	18	S.	....	....	North Franklin		Fatally injured by being struck by chute while riding on loaded cars on gangway, with his face to the rear. Died May 1.
30	Joseph Shelinskie, ...	Polish,.....	Miner, ...	48	M.	1	5	North Franklin		Killed by fall of coal from rib near face of breast.
May 13	Reynard General, ...	Polish,.....	Miner, ...	32	M.	1	2	Buck Ridge, ..		Suffocated. While working at face of breast the manway broke and the coal running through carried him down the manway.
16	Dom. Maitinic, ...	Austrian, ..	Miner, ...	58	M.	1	3	Cameron, ...	Northumberland.	Skull fractured by falling down manway from face of breast. Died May 19.
26	And. Vitcoskie, ...	Polish,.....	Miner, ...	28	S.	....	....	Big Mountain,		Killed by fall of rock at face of robbing.
	Joseph Gegaka, ...	Polish,.....	Miner, ...	32	M.	1	4	Buck Ridge, ..		Killed at face of gangway by explosion of blast that had missed fire. He started to pick out the shot and his pick struck the cap, which caused the shot to explode.
27	Fred Wishnefskie, ...	Polish,.....	Doorboy, ...	16	S.	....	....	Cameron, ...		Fatally injured by being caught by chute on gangway. He was riding in an empty mine car to his place of work and stood up in car. Died same day.
June 6	John Sock, ...	Polish,.....	Fire boss, ...	52	M.	1	3	Colbert, ...		Killed by falling down manway while making examination of working places in the morning.
8	Frank Gessner, ...	American,..	Miner, ...	36	S.	....	....	Colbert, ...		Fatally injured by explosion of gas near face of chute. He went up chute with naked light and ignited the gas. Died June 15.

TABLE 4—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
June 10	George Hudock, ...	Slavonian, ..	Loader, ...	36	M.	1	4	Bear Valley, ..	Northumberland.	Killed by rush of coal. While loading coal into mine car on gangway from a running chute he slipped and fell into car and the coal rushed in on him.
22	George Bolser, ...	Polish,.....	Miner, ...	28	M.	1	1	Henry Clay, ...		Killed by fall of rock at face of robbing.
July 28	Alex Demooch, ...	Polish,.....	Miner, ...	34	M.	1	4	Buck Ridge, ..		Killed by explosion of gas in manway. He went up the downcast manway after firing a shot and it is supposed the flame was forced through the gauze of his lamp and ignited the gas.
	Frank Vorsicki, ...	Russian, ...	Miner, ...	41	M.	1	5	Cameron, ...		Killed by falling down manway. While taking timber up to face of breast he slipped in manway and fell to the bottom.
Aug. 6	Francis Weary, ...	American, ..	Miner, ...	51	M.	1	1	Cameron, ...		Killed by falling down airway. The battery broke on which he was working.
Sept. 9	Charles Henninger, ..	American, ..	Fire boss, ...	43	M.	1	6	Colbert, ...		Killed by falling down manway while removing gas from face of breast.
22	John Miller, ...	American, ..	Miner, ...	51	S.	....	....	Corbin, ...		Killed by fall of rock at face of robbing.
23	Peter Zupski, ...	Lithuanian,	Miner, ...	47	M.	1	6	Bear Valley, ..		Killed by fall of rock at face of breast.
Oct. 9	Henry Wolengavage,.	American, ..	Miner, ...	21	M.	1	....	North Franklin		Killed by fall of coal at face of breast.
Nov. 11	John Hagush, ...	Polish,.....	Miner, ...	40	M.	1	....	Big Mountain,		Killed by explosion of shot at face of chute. Shot exploded before he got away.
22	Edward Werntz, ...	American, ..	Blacksmith, ...	41	M.	1	1	Henry Clay, ..		Killed by being caught on top of shaft cage while adjusting safety catches. Outside.
27	Theodore Pallor, ...	Austrian, ..	Laborer, ...	32	M.	1	1	Hickory Ridge,		Killed by fall of slate at face of breast.
28	Edward Dunmoyer, ...	American, ..	Miner, ...	38	M.	1	....	Cameron, ...		Killed by rush of gob from old chute in airway, which he had driven through to old gangway.
Dec. 5	Stany Colowskie, ...	Polish,.....	Miner, ...	25	S.	....	....	Corbin, ...		Burned by explosion of powder which he ignited in his powder box on gangway. Died December 10.
23	John Rodgers, ...	American, ..	Miner, ...	65	S.	....	....	North Franklin		Killed by premature explosion of shot at face of breast. He was firing two shots and the first one exploded while he was lighting the second.
29	Joseph Bamford, ...	American, ..	Miner, ...	45	M.	1	3	Burnside, ...		Killed by fall of slate at face of breast.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 7	George Nearance, ...	English, ...	Miner, ...	45	M.	Burnside, ...	Northumberland.	Leg broken by fall of slate at face of breast.
14	Anth. Yonconic, ...	Polish,.....	Jig runner, ...	23	S.	Henry Clay, ...		Arm broken. Clothing was caught by shaft while passing under it in breaker. Outside.
17	Nick Bertenie, ...	Polish,.....	Laborer, ...	29	M.	Luke Fidler, ...		Leg broken by fall of coal from rib at face of robbing.
20	Samuel Merick, ...	American,..	Miner, ...	30	M.	Katherine, ...		Legs fractured by fall of slate at face of breast.
28	Stany Waldron, ...	American,..	Loader, ...	29	S.	Cameron, ...		Leg broken by being struck by pole lying on gangway.
Feb. 11	Mike Bogush, ...	American,..	Driver, ...	16	S.	Hickory Ridge, ...		Skull fractured. Mule kicked him while hitching a trace chain. Outside.
20	William Schally, ...	American,..	Miner, ...	49	M.	Katherine, ...		Leg broken by fall of coal at face of breast.
March 13	Paul Polaskie, ...	Polish,.....	Miner, ...	50	M.	Hickory Ridge, ...		Body injured by delayed explosion of shot that he thought had missed fire.
23	Charles Kozar, ...	Polish,.....	Miner, ...	26	M.	Luke Fidler, ...		Leg fractured by fall of rock at face of robbing.
25	Oscar Rose, ...	German,....	Miner, ...	24	S.	Katherine, ...		Face and body cut and bruised by explosion of shot at face of breast. He thought the shot had missed fire.
26	George Zarrick, ...	Slavonian,..	Miner, ...	57	M.	Burnside, ...		Leg fractured by premature blast at face of gangway. He shortened match of squib.
April 14	Theo. Pensyl, ...	American,..	Timberman, ...	29	M.	Cameron, ...		Ribs fractured and body bruised by timber falling on him on gangway.
20	Thomas Madenfort, ..	American,..	Topman, ...	21	S.	Burnside, ...		Leg broken. He was putting a mine car on track on the slope and the rope swung and struck him.
27	John Petroshefskie, ..	Polish,.....	Miner, ...	48	M.	Henry Clay, ...		Leg broken and face lacerated by premature explosion of shot, caused by shortening squib.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
May 12	John Buggy, ...	American, ..	Repairman, ...	27	M.	Cameron, ...	Northumberland.	Leg fractured. While changing pinion wheel on conveyor line the wheel swung and caught his leg. Outside.
19	Mike Uhren, ...	American, ..	Laborer, ...	47	M.	Hickory Ridge, ...		Arm fractured. Jumped off timber truck and fell. Outside.
26	Stany Colonsky, ...	Polish,.....	Laborer, ...	21	S.	Buck Ridge, ...		Body injured by explosion of blast which the miner set off at face of gangway. His pick struck the cap in a shot that had missed fire.
June 9	Wally Dunsantch, ...	Polish,.....	Miner, ...	35	M.	Buck Ridge, ...		Body injured by explosion of shot at face of breast. He thought a blast that exploded in the next breast was his and went back to face of breast too soon.
10	Frank Evanovich, ...	Polish,.....	Laborer, ...	19	S.	Bear Valley, ...		Leg fractured by fall of slate at face of breast.
	Ben Bergonie, ...	Italian, ...	Company man, ...	41	S.	Burnside, ...		Leg fractured by fall of coal in chute while putting in a stopping.
17	Simon Glowa, ...	Russian, ...	Miner, ...	38	M.	Corbin, ...		Foot fractured by fall of coal at working face.
	Stany Motzaitki, ...	Polish,.....	Miner, ...	42	M.	Corbin, ...		Arm and leg fractured by fall of slate at face of breast.
July 7	William Lauskauskie,	Lithuanian,	Miner, ...	42	M.	Colbert, ...		Leg broken by fall of coal at face of breast.
20	John Colovich, ...	Polish,.....	Loader, ...	23	M.	Luke Fidler, ...		Knee joint dislocated while lifting large piece of rock into mine car on gangway.
Aug. 25	Jos. Koveleskie, ...	Polish,.....	Miner, ...	32	M.	Buck Ridge, ...		Face and hands burned by gas at face of breast. He ignited a gas feeder.
Sept. 11	Edward Moser, ...	American, ..	Miner, ...	27	M.	Corbin, ...		Small bone in leg broken by fall of coal at face of breast.
21	John Baskin, ...	American, ..	Miner, ...	43	M.	Cameron, ...		Foot fractured by fall of clod at face of robbing.
29	Steve Seneta, ...	Russian, ...	Loader, ...	19	S.	Hickory Ridge, ...		Knee fractured by timber falling on it while going up counter.
Oct. 7	James McCall, ...	American, ..	Repairman, ...	23	M.	Burnside, ...		Two toes cut off by cage at bottom of shaft.

Oct.	9	Oliver Eisenhower, ...	American,..	Fire boss, ...	32	M.	Hickory Ridge, ...	Northumberland.	Face and hands burned by gas which was ignited near face of breast while he was making his morning examination.
	20	Joseph Selosavage, ...	Russian, ...	Miner, ...	54	M.	Luke Fidler, ...		Ankle fractured by fall of coal at face of breast.
	21	And. Suprinskie, ...	Polish,.....	Timberman, ...	38	M.	Cameron, ...		Shoulder dislocated by falling across rails on gangway.
		John Barsch, ...	Polish,.....	Miner, ...	45	M.	Colbert, ...		Ankle crushed by fall of rock at face of breast.
	22	Orville Haile, ...	American,..	Driver, ...	39	M.	Cameron, ...		Finger crushed by being caught in car wheel while spragging on gangway.
Nov.	5	Harry Kerstetter, ...	American,..	Miner, ...	42	M.	Bear Valley, ...		Fingers crushed by being caught between two lumps of coal while loading mine car.
	11	Frank Greego, ...	Polish,.....	Driver, ...	19	S.	Colbert, ...		Skull fractured. Mule kicked him in traveling way.
		Ant. Zuzerskie, ...	Russian, ...	Laborer, ...	21	S.	Cameron, ...		Nose broken and face lacerated. He tried to get out of mine car before it stopped and was caught against timber on slope.
	12	Nat Ropy, ...	Hungarian, .	Miner, ...	30	M.	Hickory Ridge, ...		Spine injured by fall of slate at face of robbing.
	14	William Salada, ...	American,..	Loader, ...	21	S.	Colbert, ...		Spine injured by falling off mine car on gangway.
	21	John Zurick, ...	Polish,.....	Miner, ...	43	M.	Buck Ridge, ...		Face and hands burned by gas ignited by a shot at face of gangway.
		Harry Garbora, ...	Polish,.....	Laborer, ...	23	M.			
	28	Charles Evans, ...	American,..	Miner, ...	38	M.	Corbin, ...		Leg broken by fall of slate at face of gangway.
Dec.	10	Felix Calvish, ...	Polish,.....	Miner, ...	45	M.	Colbert, ...		Ribs fractured. Struck by a piece of slate in front of chute on gangway.
	11	William Thompson, ..	American,..	Driver, ...	31	M.	Cameron, ...		Skull fractured by a piece of rock falling off mine car while he was dumping it, at top of counter chute.
	22	Thomas Howells, ...	Welsh,.....	Bratticeman, ...	39	M.	Hickory Ridge, ...		Ribs fractured by falling into locomotive pit.
	24	Albert Owens, ...	American,..	Topman, ...	19	S.	Colbert ,.....		Legs fractured. He neglected to set switch for mine cars at top of inside slope, and rope struck him.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

North Franklin, Bear Valley, Burnside, Stirling, Henry Clay, and Big Mountain.—Ventilation, roads, drainage and condition as to safety, good.

SUSQUEHANNA COAL COMPANY

Cameron.—Ventilation, roads, drainage and condition as to safety, good.

Luke Fidler.—Ventilation, roads and condition as to safety, good. Drainage, fair.

Hickory Ridge.—Ventilation, roads, drainage and condition as to safety, good.

Hickory Swamp.—Ventilation, roads and condition as to safety, good. Drainage, fair.

SHIPMAN KOAL COMPANY

Colbert.—Ventilation, roads, drainage and condition as to safety, good.

EXCELSIOR COAL COMPANY

Corbin.—Ventilation, roads, drainage and condition as to safety, good.

BUCK RIDGE COAL MINING COMPANY

Buck Ridge.—Ventilation and condition as to safety, good. Roads and drainage, fair.

TREVORTON COLLIERY COMPANY

Katherine.—Condition as to safety, good. Ventilation, roads and drainage, fair.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

North Franklin Colliery.—A tunnel 255 feet was driven in the Rennie water level from No. 8½ to No. 5 vein.

An underground slope 1,544 feet was driven in No. 8½ vein, and one 961 feet was driven in No. 5 vein; both slopes are operated by electric hoists.

Bear Valley Colliery.—An underground slope 687 feet was driven in No. 5 vein and is operated by electric hoist.

A rock slope was driven 630 feet from surface to No. 10 vein.

A 480 K. W. generator, driven by a 30 by 42-inch Hamilton-Corliss engine, was installed in power house to furnish additional power for the colliery.

Burnside Colliery.—A tunnel 93 feet was driven in shaft section from No. 8 to No. 9 vein.

Stirling Colliery.—An underground slope 738 feet was driven in No. 5 vein and is operated by electric hoist.

SUSQUEHANNA COAL COMPANY

Cameron Colliery.—A tunnel 100 feet was driven from No. 8 to No. 7 vein, in West No. 1 slope level.

A tunnel 205 feet was driven from No. 9 to No. 10 vein in East rock slope level.

A tunnel 92 feet was driven from No. 4 to No. 5 vein in South dip workings of shaft.

A tunnel 185 feet was driven from No. 7 to No. 9 vein in the West drift.

No. 6 slope was finished at a distance of 528 feet.

A single track slope 323 feet was sunk in No. 10 vein, rock slope workings, cutting No. 10 vein in basin.

An airway 300 feet was driven in No. 11 vein, South dip shaft workings, to No. 5 slope level, and a rock airway 50 feet was driven to connect with it.

Luke Fidler Colliery.—The bath house for use of the miners, which was in course of construction last year, has been completed.

An airway 92 feet was driven from No. 10 vein to surface.

A new 16-foot fan, operated by 16 by 30-inch steam engine, was erected over the airway.

A traveling way 150 feet was driven from No. 4 vein, No. 1 shaft level, to No. 1 shaft old bottom tunnel, through rock.

An emergency hospital was blasted out of the rock 12 feet by 14 feet, finished in concrete, and heated by hot water system.

Hickory Ridge Colliery.—Two 8-ton electric motors and 8,000 feet of trolley and bonding were installed.

A new fan was erected on the North dip workings of No. 8 vein, to replace an old fan on the South dip workings.

Hickory Swamp Colliery.—Two 20-inch bore holes, 440 feet and 386 feet, were drilled for column holes for pump, and a 13-inch bore hole was drilled 430 feet for steam pipe to pump.

An air shaft 34 feet was driven to new fan on the North dip No. 8 vein, East No. 6 slope workings.

A 325 H. P. three-phase induction motor, connected to a 200 K. W. generator, was installed.

A tunnel 48 feet was driven in No. 6 slope to make a turnout for the motor.

SHIPMAN KOAL COMPANY

Colbert Colliery.—A tunnel 85 feet was driven from No. 5 to No. 4 vein; also tunnel 106 feet driven from No. 9 to No. 9½ vein.

A slope 490 feet was sunk in No. 5 vein; also slope 450 feet sunk in No. 4 vein.

A fireproof mule stable, with capacity for 34 mules, was built inside.

A telephone system was built and the entire plant inside equipped.

100 new mine cars and 40 new mules were added to the colliery equipment.

The breaker was remodeled, and new machinery, including jigs and shakers, was installed.

A two-story office building, 12 feet by 41 feet 6 inches, was erected.

A new air compressor was installed.

A new generator was installed for the purpose of lighting the entire plant.

EXCELSIOR COAL COMPANY

Corbin Colliery.—A new powder and supply house was erected at Brady slope.

The old jigs in breaker were replaced by new ones.

SEVENTEENTH DISTRICT

CARBON AND SCHUYLKILL COUNTIES

Lansford, Pa., February 28th, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my Annual Report as Inspector of Mines of the Seventeenth Anthracite District, for the year ending December 31, 1914.

Respectfully submitted,

ISAAC M. DAVIES, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	16
Number of mines,	36
Number of mines in operation,	36
Number of tons shipped to market,	4,172,640
Number of tons used at mines for steam and heat,	568,785
Number of tons sold to local trade and used by employes,	33,615
Number of tons produced,	4,775,040
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	6,659
Number of persons employed outside,	2,922
Number of fatal accidents inside of mines,	31
Number of fatal accidents outside,	10
Number of non-fatal accidents inside of mines,	18
Number of non-fatal accidents outside,	4
Number of tons of coal produced per fatal accident inside,	154,034
Number of tons produced per fatal accident outside,	477,504
Number of tons produced per fatal accident inside and outside,	116,464
Number of persons employed per fatal accident inside,	215
Number of persons employed per fatal accident outside,	292
Number of persons employed per fatal accident inside and outside,	234
Number of persons employed per non-fatal accident inside,	370
Number of persons employed per non-fatal accident outside,	730
Number of persons employed per non-fatal accident inside and outside,	435
Number of wives made widows,	17
Number of children made orphans,	30
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	53
Number of compressed air locomotives used inside,	2
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	76
Number of electric motors used outside,	1
Number of gasoline locomotives used inside,	.....
Number of fans in use,	23
Number of furnaces in use,	.....
Number of gaseous mines in operation,	17
Number of non-gaseous mines in operation,	19
Number of new mines opened,	.....
Number of old mines abandoned,	3

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Coal and Navigation Company,	4,240,778
Estate A. S. Van Wickle,	267,765
Coxe Brothers and Company, Incorporated,	235,886
Evans Colliery Company,	25,975
Elmer Neyer,	4,636
Total,	4,775,040

Production by Counties

Carbon,	2,801,479
Schuylkill,	1,973,561
Total,	4,775,040

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Name of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh Coal and Navigation Co.,	30	8	38	14	2	16	141,359	302,913	5,842	2,480	8,322	195	310	417	1,240
Estate A. S. Van Wickle,	1	.....	1	2	.....	2	267,765	133,883	415	215	630	415	.....	207	.....
Coxe Brothers and Co., Inc.,	.....	2	2	1	2	3	.....	235,886	312	173	485	.....	86	312	86
Evans Colliery Co.,	.....	.....	.....	1	.....	1	.....	25,975	85	50	135	.....	.....	85	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	5	4	9	.....	.....	.....	.....
Totals and averages,	31	10	41	18	4	22	154,034	265,280	6,659	2,922	9,581	215	292	370	730

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	1	....	....	....	....	....	....	....	....	....	1	3.23
Falls of roof,	....	....	....	1	1	....	....	1	....	1	1	....	5	16.13
Mine cars,	....	....	....	....	2	1	....	1	1	1	....	....	6	19.35
Explosions of gas,	....	....	2	....	....	....	....	....	7	....	....	....	9	29.03
Suffocation by gas, etc.	....	2	1	....	....	....	....	....	....	....	1	1	5	16.12
Falling into slopes, etc.	1	....	....	....	....	....	....	....	....	....	....	....	1	3.23
Crushed at batteries,	....	....	....	....	....	....	....	....	....	....	2	....	2	6.45
Electricity,	....	....	....	....	....	1	....	....	....	....	....	....	1	3.23
Rush of gob,	....	....	1	....	....	....	....	....	....	....	....	....	1	3.23
Totals,	1	2	5	1	3	2	....	2	8	2	4	1	31	100.00
Outside														
Cars,	1	1	....	....	1	1	....	1	....	....	....	....	5	50.00
Machinery,	....	....	....	1	....	....	....	....	....	....	....	....	1	10.00
Struck by coal,	....	....	1	....	....	....	....	....	....	....	....	....	1	10.00
Struck by rock,	....	....	....	....	1	....	....	....	....	....	....	....	1	10.00
Struck by piece of clay	....	....	1	....	....	....	....	....	....	....	....	....	1	10.00
Struck by timber,	....	....	....	....	....	....	....	....	....	1	....	....	1	10.00
Totals,	1	1	2	1	2	1	....	1	....	1	....	....	10	100.00
Grand totals inside and outside,	2	3	7	2	5	3	....	3	8	3	4	1	41	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	....	....	....	....	....	....	1	....	....	1	5.55
Falls of slate,	....	....	....	....	1	....	....	....	....	1	....	....	2	11.11
Falls of roof,	....	....	....	....	....	....	1	....	....	....	....	....	1	5.56
Mine cars,	1	....	....	....	....	....	....	....	3	1	1	....	6	33.33
Explosions of gas,	3	....	....	....	....	....	....	....	....	....	....	....	3	16.66
Blasts, premature and otherwise,	....	....	....	....	....	....	1	....	1	....	....	....	2	11.11
Struck by timber,	....	....	....	1	....	....	....	....	....	....	....	....	1	5.56
Struck by piece of ice,	....	....	1	....	....	....	....	....	....	....	....	....	1	5.56
By falling,	....	....	....	....	1	....	....	....	....	....	....	....	1	5.56
Totals,	4	....	1	1	2	....	2	....	4	3	1	....	18	100.00
Outside														
Cars,	....	....	....	1	....	....	....	....	....	....	....	....	1	25.00
Struck by rock,	1	....	1	....	....	....	....	....	....	....	....	....	2	50.00
By falling,	....	....	1	....	....	....	....	....	....	....	....	....	1	25.00
Totals,	1	....	2	1	....	....	....	....	....	....	....	....	4	100.00
Grand totals inside and outside,	5	....	3	2	2	....	2	....	4	3	1	....	22	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1	2	3	1	1	....	....	1	2	....	1	....	12
Miners' laborers,	....	....	2	....	....	1	....	....	4	....	2	....	9
Drivers and runners,	....	....	....	....	....	1	....	....	2	....	....	....	3
Company men,	....	....	....	....	2	....	....	....	....	1	1	1	5
Loaders,	....	....	....	....	....	....	....	1	....	....	....	....	1
Pole-men,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	1	2	5	1	3	2	....	2	8	2	4	1	31
Outside													
Engineers and firemen,	1	....	....	....	....	....	....	....	....	....	....	....	1
Slatepickers (boys),	....	....	....	....	....	....	....	1	....	....	....	....	1
Miners,	....	....	1	....	....	....	....	....	....	....	....	....	1
Chute bosses,	....	....	1	....	....	....	....	....	....	....	....	....	1
Laborers,	....	....	....	....	2	....	....	....	....	1	....	....	3
Sweepers,	....	....	....	1	....	....	....	....	....	....	....	....	1
Brakemen,	....	1	....	....	....	....	....	....	....	....	....	....	1
Doorboys,	....	....	....	....	....	1	....	....	....	....	....	....	1
Totals,	1	1	2	1	2	1	....	1	....	1	....	....	10
Grand totals inside and outside,	2	3	7	2	5	3	....	3	8	3	4	1	41

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Assistant mine foremen,	....	....	....	....	1	....	....	....	1	....	....	....	2
Miners,	2	....	....	....	1	....	....	....	2	2	....	....	7
Miners' laborers,	1	....	....	1	....	....	2	....	....	1	....	....	5
Drivers and runners,	....	....	....	....	....	....	....	....	1	....	....	....	1
Company men,	....	....	1	....	....	....	....	....	....	....	1	....	2
Pole boys,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	4	....	1	1	2	....	2	....	4	3	1	....	18
Outside													
Engineers and firemen,	....	....	1	....	....	....	....	....	....	....	....	....	1
Laborers,	1	....	1	1	....	....	....	....	....	....	....	....	3
Totals,	1	....	2	1	....	....	....	....	....	....	....	....	4
Grand totals inside and outside,	5	....	3	2	2	....	2	....	4	3	1	....	22

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	2	1	1	2	1	....	1	....	1	1	....	11
Irish,	....	....	....	....	....	....	....	....	1	....	....	....	1
Polish,	1	....	....	....	....	1	....	....	....	1	....	....	3
Hungarian,	....	....	1	....	1	....	....	....	....	....	....	....	2
Italian,	....	....	....	....	....	....	....	....	....	....	1	....	1
Slavonian,	....	....	2	....	....	....	....	2	3	1	1	....	9
Lithuanian,	....	....	1	....	....	....	....	....	....	....	....	....	1
Austrian,	....	....	1	....	....	....	....	....	4	....	....	....	5
Russian,	....	1	....	....	1	....	....	....	....	....	....	....	2
Greek,	....	....	....	....	1	....	....	....	....	....	1	1	3
Tyrolean,	....	....	....	....	....	1	....	....	....	....	....	....	1
Horwat,	....	....	1	....	....	....	....	....	....	....	....	....	1
Croatian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	2	3	7	2	5	3	....	3	8	3	4	1	41

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	4	....	....	....	....	....	....	....	3	....	....	....	7
Welsh,	....	....	....	....	....	....	....	....	1	....	....	....	1
Scotch,	....	....	....	....	1	....	....	....	....	....	....	....	1
German,	....	....	1	....	....	....	....	....	....	....	....	....	1
Hungarian,	....	....	1	1	....	....	....	....	....	....	....	....	2
Slavonian,	....	....	1	1	....	....	1	....	....	2	1	....	6
Lithuanian,	....	....	....	....	1	....	....	....	....	....	....	....	1
Austrian,	1	....	....	....	....	....	1	....	....	....	....	....	2
Russian,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	5	....	3	2	2	....	2	....	4	3	1	....	22

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Lehigh Coal and Navigation Co.																
Nesquehoning Colliery:																
Number 1,	Tunnel,	Gaseous,	Natural,								..	20	162,630	105,420	*	348
Number 2,	Shaft,	Gaseous,	2 Fans,	21	7.0	3.3	50	2.0	Guibal,	Steam,	~	18	199,900	139,900	284,200	371
				24	7.0	6.0	80	2.4	Guibal,	Steam,	~					
Number 2,	Tunnel,	Non-gas.,	Natural,								..	1	14,460	14,460	15,530	7
Number 1,	Drift,	Non-gas.,	Natural,								..	16	5,220	5,220	5,220	16
Lansford Colliery:																
Number 4,	Slope,	Gaseous,	Fan,	24	8.0	7.0	96	3.0	Sturtevant,	Steam,	~	5	98,600	104,400	104,400	247
Number 4,	Shaft,	Gaseous,	Fan,								~	4	62,700	69,600	69,600	155
Number 5,	Shaft,	Gaseous,	Fan,	21	7.0	6.6	50	1.4	Guibal,	Steam,	~	9	73,410	73,410	76,860	206
			Fan,	9	3.0	0.7	180	2.0	Sirocco,	Electricity,	~					
Number 6,	Shaft,	Gaseous,	Fan,	22	8.0	6.0	86	1.4	Guibal,	Steam,		3	62,500	62,500	68,890	244
			Natural,													
Coal Dale Colliery:																
Number 8,	Shaft,	Gaseous,	Fan,	24	8.0	6.0	70	1.2	Guibal,	Steam,	..	4	61,290	49,950	85,000	130
Number 8,	Slope,	Gaseous,	Fan,	12	4.0	4.0	80	1.2	Sturtevant,	Steam,	..	1	25,000	25,000	25,000	10
			Natural,													
Number 9,	Shaft,	Gaseous,	Fan,	20	8.0	6.0	84	1.8	Sturtevant,	Steam,	..	9	131,300	111,000	132,200	120
Springdale,	Tunnel,	Gaseous,	Fan,	7	2.6	10.0	95	0.8	American Blower Co.	Steam,	..	1	11,200	11,200	11,200	22

*Return air escapes to surface through old workings.

Greenwood Colliery:																
Number 10, ...	Shaft,.....	Gaseous, ..	Fan, ...	24	8.0	6.0	74	1.8	Guibal, ...	Steam,.....	..	4	60,000	60,000	92,600	240
Number 10, ...	Tunnel, ...	Gaseous, ..	Fan, ...	12	4.0	4.0	76	0.6	Guibal, ...	Steam,.....	..	1	11,200	14,000	14,000	16
Rahn Colliery:																
Number 11, North Dip, ..	Shaft,.....	Gaseous, ..	Fan, ...	24	7.9	6.3	75	2.5	Guibal, ...	Steam,.....	..	6	87,500	86,500	196,000	133
Number 11, South Dip, ..	Shaft,.....	Gaseous, ..	Fan, ...	9	3.0	0.7	134	2.4	Sirocco, ..	Electricity,	..	8	73,000	68,000	80,000	216
Number 11, ...	Tunnel, ...	Gaseous,	Fan, ...	12	4.0	3.6	110	0.8	Guibal, ...	Steam,.....		1	17,000	17,000	17,640	15
			Natural, ..													
Fosters, ...	Tunnel, ...	Gaseous, ..	Fan, ...	21	7.0	5.3	45	0.8	Guibal, ...	Steam,.....	..	6	49,700	49,700	53,000	93
Tamaqua Colliery:																
Number 14, South Side,	Shaft,.....	Gaseous, ..	Fan, ...	20	6.8	6.0	100	2.8	Guibal, ...	Electricity,	..	8	98,300	98,300	99,900	174
Number 14, North Side,	Shaft,.....	Gaseous, ..	Fan, ...	20	7.0	5.3	68	1.7	Guibal, ...	Steam,.....	..	8	103,800	103,800	105,500	218
Estate A. S. Van Wickle																
Coleraine Colliery:																
Buck Mountain, ...	Slope, ...	Gaseous, ..	Fan, ...	16	4.0	5.0	85	.....	Guibal, ...	Steam,.....	..	4	52,856	47,970	58,713	165
Coxe Brothers and Co., Inc.																
Beaver Meadow Colliery:																
Number 2, ...	Slope, ...	Non-gas.,	Fan, ...	20	6.0	5.6	90	0.8	}			1	19,500	16,500	57,400	30
Number 4, ...	Slope, ...	Non-gas.,	Fan, ...	12	5.0	5.6	110	0.4	} Guibal, ...	Steam,.....	{	3	40,500	18,440	93,800	92
Number 6, ...	Slope, ...	Non-gas.,	Fan, ...	20	6.0	5.6	90	0.8	}			1	19,520	16,480	57,360	26
Evans Colliery Co.																
Evans Colliery:																
No. 1 Gamma, ...	Slope, ...	Non-gas.,	Fan, ...	11	4.0	3.6	130	.....	American Blower Co.	Steam,.....	..	3	25,000	23,500	26,000	85

Note—There are 13 non-gaseous mines in which the principal work done is robbing. No air measurements taken.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Coal and Navigation Co.						
Nesquehoning,	Carbon,	Edward Ludlow, Vice President	Lansford,	W. G. Whildin, Inside Supt. A. Leonarz, Outside Supt..	Lansford,	C. R. R. of N. J. and L. and N. E.
Lansford,	Carbon,					
Coal Dale,	Schuylkill, Carbon,					
Greenwood,	Schuylkill,					
Rahn,	Schuylkill,					
Tamaqua,	Schuylkill,					
Coal Dale Washery,	Schuylkill,					
Greenwood Washery,	Schuylkill,					
Hauto Washery,	Carbon,					
Estate A. S. Van Wickle						
Coleraine,	Carbon,	John Harvey,	Hazleton,			L. V., P. and R. and C. R. R. of N. J.
Coxe Brothers and Co., Inc.						
Beaver Meadow,	Carbon,	Thomas Thomas, Mining Supt.	Wilkes-Barre,	W. H. Davies,	Hazleton,	Lehigh Valley
Evans Colliery Co.						
Evans,	Carbon,	Gwillym Edwards,	Luzerne,	A. F. Bredbenner,	Beaver Meadow,	Lehigh Valley
Elmer Neyer						
Black Rock,	Carbon,	Elmer Neyer,	Summit Hill,			None

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Lehigh Coal and Navigation Co.													
Nesquehoning,	Carbon,	825,513	60,202	6,563	892,278	263	1,704	5	5	1,000	344,240	78,942	54
Lansford,	Carbon,	835,721	167,712	1,292	1,004,725	254	2,351	18	6	.....	480,803	107,940	63
Coal Dale,	Schuylkill,	816,516	43,240	3,268	863,024	265	1,498	9	1	.....	254,706	88,193	64
	Carbon,												
Greenwood,	Schuylkill,	354,484	45,555	6,159	406,198	224	779	3	1	.....	157,824	14,772	42
Rahn,	Schuylkill,	372,924	53,451	46	426,421	258	896	.....	.....	.....	133,313	21,851	33
Tamaqua,	Schuylkill,	331,217	65,000	606	396,823	260	854	3	2	.....	222,078	21,001	21
		3,536,375	435,160	17,934	3,989,469	....	8,082	38	15	1,000	1,592,964	332,699	277
Washeries													
Coal Dale,	Schuylkill,	61,778	25,466	42	87,286	177	122	.....	1	.....	250	.....	1
Greenwood,	Schuylkill,	7,068	3,005	.....	10,073	28	56	.....	.....	.....	.....	6,000	.....
Hauto,	Carbon,	121,641	30,850	1,459	153,950	209	62	.....	.....	.....	.....	.....	1
		190,487	59,321	1,501	251,309	....	240	.....	1	.....	250	6,000	2
Totals,		3,726,862	494,481	19,435	4,240,778	....	8,322	38	16	1,600	1,593,214	338,699	279
Estate A. S. Van Wickle													
Coleraine,	Carbon,	216,072	46,572	5,121	267,765	301	630	1	2	40,625	84,925	.....	64
Coxe Brothers and Co., Inc.													
Beaver Meadow,	Carbon,	212,142	19,648	4,096	235,886	233	485	2	3	12,325	170,002	.....	36

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Evans Colliery Co.													
Evans,	Carbon,	17,564	8,000	411	25,975	202	135	.....	1	.250	24,750	450	6
Elmer Neyer													
Black Rock,	Carbon,	.....	84	4,552	4,636	298	9	.....	.....	.....	.....	1,200	.....
Grand totals,		4,172,640	568,785	33,615	4,775,040	....	9,581	41	22	54,200	1,872,891	340,349	385

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Lehigh Coal and Navigation Co.,	Carbon, Schuylkill,	3	186	101	23,762	23,948	.....	43	.....	77	153	36,276	*25	54,443	8,865	9	12
Estate A. S. Van Wickle,	Carbon,	.....	.....	18	2,150	2,150	.....	6	.....	.....	36	1,340	7	7,347	2,466	1	.....
Coxe Brothers and Co., Inc.,	Carbon,	.....	.....	8	2,000	2,000	.....	5	2	.....	20	1,750	1	1,200	1,100	1	1
Evans Colliery Co.,	Carbon,	.....	.....	2	700	700	.....	.....	.....	.....	6	185	5	3,000	1,600	.....	.....
Elmer Neyer,	Carbon,	.....	.....	1	35	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	.....	3	186	130	28,647	28,833	.....	54	2	77	215	39,551	38	65,990	14,031	11	13

*Includes water tanks.

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh Coal and Navigation Co.	Schuylkill, ... Carbon, ...	13	32	66	1,610	387	224	61	15	2,042	1,392	5,842	5	19	218	272	237	33	38	1,658	2,480	8,322
Estate A. S. Van Wickle, ...	Carbon, ...	4	...	3	154	151	30	3	8	49	13	415	1	2	18	31	25	3	8	127	215	630
Coxe Brothers and Co., Inc., ...		1	4	....	166	70	14	6	1	11	39	312	....	1	12	14	2	2	4	138	173	485
Evans Colliery Co., ..		1	....	....	44	23	4	....	3	9	1	85	1	1	2	6	16	....	....	24	50	135
Elmer Neyer, ...		....	....	....	2	1	2	....	....	.....	.....	5	....	....	....	1	....	....	....	3	4	9
Totals, ...	.....	19	36	69	1,976	632	274	70	27	2,111	1,445	6,659	7	23	250	324	280	38	50	1,950	2,922	9,581

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Lehigh Coal and Navigation Co.,	Carbon, Schuylkill,	20	16	21	21	21	22	17	13	17	18	15	14	215
Estate A. S. Van Wickle,	Carbon,	25	24	25	24	25	26	26	26	25	26	24	25	301
Coxe Brothers and Co., Inc.,	Carbon,	14	12	24	23	23	25	17	13	25	9	21	22	233
Evans Colliery Co.,	Carbon,	19	14	18	13	11	13	19	19	16	21	20	19	202
Elmer Neyer,	Carbon,	26	23	25	23	25	26	25	25	24	27	24	25	298

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 9	Robert Williams, ...	American, ..	Fireman, .	21	S.	....	....	Coal Dale, ...	Schuylkill, .	Killed by being run over by locomotive. Outside.
12	Joseph Goss, ...	Polish, ...	Miner, ...	38	M.	1	....	Greenwood, ...	Schuylkill, .	Killed by being knocked down a chute by a wind blast caused by heavy fall of coal.
Feb. 10	Michael Duffy, ...	American, ..	Miner, ...	32	M.	1	....	Lansford, ...	Carbon, ..	Suffocated by gas in face of breast. Carvish left his safety lamp in cross-cut and went to face with electric light and was overcome by gas. Duffy went in search of him with electric light also and was overcome.
	Alex Carvish, ...	Russian, ...	Miner, ...	35	M.	1	2			
20	Raymond Curry, ...	American, ..	Brakeman,	17	S.	....	....	Nesquehoning, ...	Carbon, ...	Killed by being caught between cars while uncoupling them. Outside.
March 3	John Mattie, ...	Hungarian,	Chute boss,	49	M.	1	....	Beaver Meadow, ...	Carbon, ...	Fatally injured by being struck by large lump of frozen coal while loading at bank. Outside.
4	Frank Lozonsky, ...	Slavonian, .	Laborer, ..	26	S.	....	....	Coal Dale, ...	Schuylkill, .	Burned by explosion of gas at face of blind chute.
5	John Matsko, ...	Slavonian, .	Miner, ...	32	M.	1	3	Nesquehoning, ...	Carbon, ...	Suffocated in chute by rush of fine coal.
11	Frank Shimkus, ...	Lithuanian,	Miner, ...	31	S.	....	....	Tamaqua, ...	Schuylkill, .	Killed by fall of coal at face of chute.
16	Elmer Sywell, ...	American, ..	Miner, ...	24	S.	....	....	Nesquehoning, ...	Carbon, ...	Killed by loose rock and gob falling on him while starting chute 30 feet from gangway.
	Paul Sinnic, ...	Austrian, ...	Miner, ...	32	M.	1	4	Greenwood, ...	Schuylkill, .	Killed by frozen clay falling on him on stripping. Outside.
28	Michael Gulish, ...	Horwat, ...	Laborer, ..	21	S.	....	....	Coal Dale, ...	Schuylkill, .	Fatally injured by explosion of gas at face of gangway. Died March 26.
April 16	Erastus Freeze, ...	American, ..	Sweeper, .	17	S.	....	....	Tamaqua, ...	Schuylkill, .	Killed by being caught in scraper line shaft. Outside.
17	Ignots Boutsky, ...	Croatian, ...	Miner, ...	39	M.	1	3	Coal Dale, ...	Schuylkill, .	Killed while timbering on gangway. The poles broke and the roof fell and caught him on top of a car.
May 6	Joe Belli, ...	Greek, ...	Company man, ...	44	M.	1	1	Coal Dale, ...	Schuylkill, .	Fatally injured between car and gangway rib. Died May 15.
	Grant Holler, ...	American, ..	Company man, ...	34	M.	1	2	Lansford, ...	Carbon, ...	Fatally injured by being bumped by car at bottom of shaft. Died May 11.

May	16	Frank Banya, ...	Russian, ...	Laborer, ..	30	M.	1	2	Nesquehoning, ...	Carbon, ...	Killed by being run over by empty gondola. Outside.
	23	John P. Bonner, ...	American, ..	Miner, ...	39	M.	1	....	Lansford, ...	Carbon, ...	Killed by fall of top rock in mule-way, which he was making larger.
	28	Joseph Peshock, ...	Hungarian,	Laborer, ..	18	S.	....	....	Beaver Meadow, ...	Carbon, ...	Killed by piece of rock that fell from the south bank of stripping. Outside.
June	5	Joseph Kachurick, ..	Polish, ...	Laborer, ..	18	S.	....	....	Lansford, ...	Carbon, ...	Killed by coming in contact with an electric wire near face of gangway.
	6	Louis Concie, ...	American, ..	Doorboy, ..	16	S.	....	....	Greenwood, ...	Schuylkill, .	Killed by loaded car near breaker on way home. Outside.
	16	William Negri, ...	Tyrolean, ...	Driver, ...	16	S.	....	....	Coal Dale, ...	Schuylkill, .	Killed by falling under loaded car on gangway.
Aug.	12	Charles Kowatch, ...	American, ..	Slatepicker,	16	S.	....	....	Nesquehoning, ...	Carbon, ...	Killed by cars near breaker. Outside.
	19	Tom McCloskey, ...	Slavonian, .	Miner, ...	34	M.	1	4	Lansford, ...	Carbon, ...	Killed by fall of roof in chute near gangway.
	20	John Malanskie, ...	Slavonian, .	Loader, ..	21	S.	....	....	Coal Dale, ...	Schuylkill, .	Fatally injured by derailed car on gangway. Died August 22.
Sept.	12	John Konitsky, ...	Slavonian, .	Runner, ..	22	S.	....	....	Lansford, ...	Carbon, ...	Killed by car at foot of car hoist.
	16	Albert Dobish, ...	Austrian, ...	Laborer, ..	23	S.	....	....	Lansford, ...	Carbon, ..	Killed by explosion of gas in return air course. It is not known how the gas was ignited. Electric and locked Wolf safety lamps only were used in this air course.
		Joseph Gurko, ...	Austrian, ...	Laborer, ..	29	S.	....	....			
		Peter Pasko, ...	Austrian, ...	Laborer, ..	18	S.	....	....			
		Yatzick Ratrap, ...	Austrian, ...	Miner, ...	40	M.	1	1			
		Joseph Mishick, ...	Slavonian, .	Laborer, ..	19	S.	....	....			
		Bernard Cunning, ..	Irish, ...	Miner, ...	62	M.	1	....			
		John Lasko, ...	Slavonian, .	Driver, ...	17	S.	....	....			
Oct.	13	Mike Kastrava, ...	Polish, ...	Company man, ...	21	S.	....	....	Coal Dale, ...	Schuylkill, .	Killed by fall of roof 75 feet from face of air course.
	23	John Yaulich, ...	Slavonian, .	Laborer, ..	20	S.	....	....	Lansford, ...	Carbon, ...	Killed by timber falling from timber truck. Outside.
		Robert Moser, ...	American, ..	Poleman, .	26	M.	1	....	Coal Dale, ...	Schuylkill, .	Fatally injured by cars on gangway. Died October 24.
Nov.	16	Joe Sockera, ...	Greek, ...	Miner, ...	34	M.	1	4	Lansford, ...	Carbon, ...	Killed by rush of coal while starting battery.
		Carlo Chiaponi, ...	Italian, ...	Laborer, ..	22	S.	...	....	Lansford, ...	Carbon, ...	Killed by fall of roof in gangway while making safety hole.
	18	George Endy, ...	American, ..	Company man, ...	40	M.	1	4	Tamaqua, ...	Schuylkill, .	Crushed at battery by rush of coal.
	21	Wassel Shershin, ...	Slavonian, .	Laborer, ..	25	S.	....	....	Coleraine, ...	Carbon, ...	Suffocated by rush of coal at face of chute.
Dec.	31	Joe Zupko, ...	Greek, ...	Company man, ...	22	S.	....	....	Lansford, ...	Carbon, ...	Suffocated in a car of coal he was loading under a chute on gangway.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 1	Mike Herbert, ...	Austrian, ...	Laborer, ...	18	S.	Coal Dale Washery, ..	Schuylkill, .	Seriously injured while starting rock in chute. Outside.
13	Chester Granger, ...	American, ..	Miner, ...	26	M.	Lansford, ...	Carbon, ...	Hands and face burned by explosion of gas at face of chute.
	John Hoban, ...	American, ..	Miner, ...	26	M.	Lansford, ...	Carbon, ...	Hands and face burned by explosion of gas at face of chute.
	Joseph Boyle, ...	American, ..	Laborer, ...	24	M.	Lansford, ...	Carbon, ...	Hands and face burned by explosion of gas at face of chute.
23	Joseph Gozziak, ...	American, ..	Poleboy, ...	17	S.	Greenwood, ...	Schuylkill, .	Leg broken by cars on gangway while opening door.
March 3	Leo Hindo, ...	Slavonian, .	Company man, ...	26	S.	Lansford, ...	Carbon, ...	Back injured by piece of ice that fell down the shaft.
16	Michael Youlisa, ...	Hungarian,	Laborer, ...	40	M.	Beaver Meadow, ...	Carbon, ...	Ribs fractured by piece of falling rock on stripping. Outside.
	William Fruntz, ...	German, ...	Engineer, ...	45	M.	Nesquehoning, ...	Carbon, ...	Leg broken by falling from tank platform on stripping. Outside.
April 14	John Sturack, ...	Hungarian,	Laborer, ...	40	M.	Beaver Meadow, ...	Carbon, ...	Arm crushed while attempting to board moving car on stripping. Arm was afterward amputated. Outside.
22	George Churnetch, ..	Slavonian, .	Laborer, ...	21	S.	Coleraine, ...	Carbon, ...	Leg broken by being caught between plank and gangway leg.
May 11	John Slaney, ...	Lithuanian,	Miner, ...	26	M.	Lansford, ...	Carbon, ...	External and internal injuries by falling from chute spout.
16	John Gardiner, ...	Scotch, ...	Assistant foreman, ..	42	M.	Nesquehoning, ...	Carbon, ...	Arm, shoulder and scalp injured by fall of slate on gangway 200 feet from drift mouth.
July 21	Ignes Magick, ...	Austrian, ...	Laborer, ...	35	M.	Lansford, ...	Carbon, ...	Face lacerated by premature blast at battery.
30	John Hoselick, ...	Slavonian, .	Laborer, ...	30	M.	Coleraine, ...	Carbon, ...	Leg fractured by fall of roof while robbing pillars.
Sept. 8	James Derby, ...	American, ..	Assistant foreman, ..	50	M.	Tamaqua, ...	Schuylkill, .	Ribs and collar bone fractured while riding on front of motor through a closed door.
	Harry Swank, ...	American, ..	Driver, ...	17	S.	Nesquehoning, ...	Carbon, ...	Arm and elbow crushed. Fell under moving car on gangway.
16	George Boyle, ...	American, ..	Miner, ...	23	S.	Tamaqua, ...	Schuylkill, .	Face cut and jaw broken by premature blast in car on gangway.

Sept.	19	William Williams,	Welsh, ...	Miner, ...	65	M.	Nesquehoning, ...	Carbon, ...	Forearm and shoulder fractured between car and gangway leg.
Oct.	6	Joseph Lorenz, ...	Slavonian, .	Miner, ...	42	M.	Beaver Meadow, ...	Carbon, ...	Seriously injured by fall of coal at face of breast.
	12	Joseph Lychack, ...	Slavonian, .	Miner, ...	44	M.	Evans, ...	Carbon, ...	Head and face cut by fall of slate at face of breast.
	14	Andrew Yacovitch, ..	Russian, ...	Laborer, ...	22	S.	Coal Dale, ...	Schuylkill, .	Seriously injured between car and timber at face of gangway.
Nov.	5	John Evans, ...	Slavonian, .	Company man, ...	52	M.	Nesquehoning, ...	Carbon, ...	Hip and ribs broken by cars. He jumped from motor to the high side of gangway.

CONDITION OF COLLIERIES

LEHIGH COAL AND NAVIGATION COMPANY

Nesquehoning.—Ventilation, drainage, roads and general condition as to safety, good. No. 3 slope was abandoned as a separate opening February 9.

Lansford.—Ventilation generally good. Drainage, roads and condition as to safety, good.

Coal Dale.—Ventilation, drainage and roads, generally good. Condition as to safety, good.

Greenwood.—Ventilation generally good. Drainage and roads fair. General condition as to safety, good. No. 10 Slope caved in and was abandoned as a hoisting slope June 6.

Rahn.—Ventilation, drainage, and condition as to safety, good. Roads fair.

Tamaqua.—Ventilation, drainage, and condition as to safety, good. Roads fair.

Hauto Washery.—The old building suspended operations February 14 and the new washery commenced handling dirt bank material February 11.

ESTATE A. S. VAN WICKLE

Coleraine.—Ventilation, drainage, roads and general condition as to safety, good. The Florey slope was abandoned October 5, having been robbed out.

COXE BROTHERS AND COMPANY, INCORPORATED

Beaver Meadow.—Ventilation generally good. Drainage, roads, and condition as to safety, good.

EVANS COLLIERY COMPANY

Evans.—Ventilation generally good. Drainage and roads, fair. Condition as to safety, good.

ELMER NEYER

Black Rock.—Ventilation and roads fair. Drainage and condition as to safety, good.

IMPROVEMENTS

LEHIGH COAL AND NAVIGATION COMPANY

Nesquehoning Colliery.—Reinforced concrete and tile portal at Lausanne drainage tunnel, including 50-foot open cut. The concrete walls and arch were carried into the tunnel a distance of 220 feet.

Built a fireproof washhouse of standard tile construction, with steel lockers and pulley arrangement for lifting wet clothes to the top of the building. This wash house will accommodate 234 men. Built a conveyor to handle dirt bank material. A drainage hole in the Holmes vein, North basin South dip, 3rd to 2nd level, No. 2 shaft, was driven to connect with the Lausanne drainage tunnel. Three fireproof mine hospitals were constructed. A single track plane, 575 feet long, was built to handle the coal from the Mammoth stripping to the breaker tracks. Steel cages, landing fans and stops were installed at the No. 2 shaft. A narrow gauge track 7,675 feet long was laid between this colliery and the Lansford colliery for the purpose of transporting all the mine timber necessary for the colliery, to be carried from the Lansford timber wharf. A fireproof powder house was built and supplies the entire colliery.

Lansford Colliery.—The Primrose crop, No. 5 Mine, south of Lansford, was filled by means of a steam shovel, in order to prevent the settling of the surface. A transfer truck was installed at the top of the No. 6 Shaft. Two 75,000 gallon tanks were constructed. The No. 6 coal hoisting engine house was rebuilt and made fireproof. A loose drum was placed on the No. 6 coal hoist engines. New steel cages and a car pusher were installed at the No. 4 Shaft. Two electrically driven centrifugal pumps were installed in the breaker for the purpose of handling wash water. A wide gauge track and a 14-inch wooden pipe slush line were laid from the No. 6 Breaker to the drill holes in connection with the No. 4 Mine fire. A double track plane between the 4th and 5th levels, No. 4 mine, is practically completed. At the No. 5 Shaft a fireproof electric coal hoist house and engines have been erected. A modern, up-to-date sub-station has been constructed at No. 5 Mine, also an air compressor electrically driven. A fireproof fan house and a fan to ventilate the West 4th level of No. 4 Mine have been erected. A new fan and sub-station have been installed at the Black Rock Slope of the No. 5 Mine. A motor drive for the empty car haul at No. 5 Shaft has been installed. The tender shaft engines at No. 4 Shaft are almost completed.

Coal Dale Colliery.—A new heater, feed water pumps and an air compressor have been installed at the No. 9 boiler room. A fireproof safety lamp house has been erected at the No. 9 Tunnel. A four-compartment shaft, three for coal and one for tender, has been finished. Installed a new jig drive. Steel head frames have been erected over the new shaft. Erected a heating shed for mine cars.

Greenwood Colliery.—Reopened the Old Trial Slope and installed an electric hoist in connection with the same. The sinking of a new coal shaft was begun. New feed water heaters and feed lines were installed in the boiler room. An 8-inch steam line to Greenwood washery was erected. Installed 500 Wico electric lamps. Erected a 75,000 gallon steel water tank. Constructed a new sub-station. Built a narrow gauge track from the water level tunnel mouth to the breaker. Rebuilt the saw mill destroyed by fire in 1913. Installed elevators and a belt conveyor line at the breaker for the handling of condemned coal and lip screenings.

Rahn Colliery.—Electricity has been installed in the mines. Finished sinking a four-compartment shaft. Changed the breaker drive from steam to electric. Built a new sub-station. Built a fireproof

wash house to accommodate 156 men. Installed transfer truck, pit, etc., at the top of the new shaft. Steel head frames have been erected over the new shaft. Built fireproof building for the new electric coal and tender hoists. Installed electric air compressor. Electrified the Mountain fan. Installed electric hoists for the coal and tender shafts.

Tamaqua Colliery.—Steel cages have been placed on the shaft. Built a fireproof safety lamp room and foreman's office. Reopened the Old Levans slope. Installed 500 Hirsch electric lamps. A new shaft is being sunk.

Coal Dale Washery.—Four Lehigh Valley jigs were installed to replace six Christ jigs.

Greenwood Washery.—Two Joplin jigs were installed. Capacity of dumping hopper was doubled. A 12-inch wood line for wash water was laid from the Greenwood tunnel. An overhead bridge across the L. and N. E. tracks is being constructed for the use of employes.

Hauto Washery.—A new pumping station for handling slush has been installed. The old washery building has been converted into a storage for fuel coal.

ESTATE A. S. VAN WICKLE

Coleraine Colliery.—Replaced the old timbers in the mouth of the Buck Mountain slope with a steel and concrete structure. In the Wheelbarrow slope a tunnel was driven from the Buck Mountain vein to the basin of the Gamma vein, a distance of 210 feet, on a grade of 2½ degrees. Eight abandoned breasts were walled up with solid masonry, thus increasing the efficiency of the air currents. In the No. 2 Wharton (Rock Slope) 784 feet of gangway was driven from the foot of the slope to the No. 2 New Mammoth slope bottom. Pumped the water from the Old Carter inside Wharton slope, with the idea of reopening. Constructed a concrete stable. Built an extension 660 feet long, to the flume in the No. 2 basin.

COXE BROTHERS AND COMPANY, INCORPORATED

Beaver Meadow Colliery.—Installed an electric hoist in the No. 5 Slope to enable the coal in the Wharton vein to be mined. No. 5 Slope and two Gamma veins were reopened to take No. 12 Tunnel coal to No. 2 Slope instead of No. 4 Slope, thereby reducing transportation one mile, both inside and outside. Two new engines were installed in the No. 2 Slope. The breaker was remodeled and improved to reduce the cost of preparation and effect an annual saving. The Breaker refuse conveyor line was entirely renewed; and a new engine and steam line for driving same was installed. A Gate gyrating rock crusher was installed at the breaker to crush the large mine rock to a size to be handled by the refuse conveyor. 132,079 cubic yards of material were excavated from the Greenfield stripping and 188,365 cubic yards from the Temperance stripping.

EVANS COLLIERY COMPANY

Evans Colliery.—A new fan was erected on the Buck Mountain slope. A 6-inch hole was drilled to the head of the Buck slope and an engine was erected to hoist therefrom. Installed a new 350 H. P. Sterling boiler.

EIGHTEENTH DISTRICT

SCHUYLKILL COUNTY

Pottsville, Pa., March 3, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my Annual Report as Inspector of Mines of the Eighteenth Anthracite District, for the year ending December 31, 1914.

Respectfully submitted,

JOHN CURRAN,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	13
Number of mines,	45
Number of mines in operation,	45
Number of tons of coal shipped to market,	2,828,098
Number of tons used at mines for steam and heat,	337,230
Number of tons sold to local trade and used by employes,	34,525
Number of tons produced,	3,199,853
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	4,672
Number of persons employed outside,	1,977
Number of fatal accidents inside of mines,	24
Number of fatal accidents outside,	.....
Number of non-fatal accidents inside of mines,	38
Number of non-fatal accidents outside,	11
Number of tons of coal produced per fatal accident inside,	133,327
Number of tons produced per fatal accident outside,	.....
Number of tons produced per fatal accident inside and outside,	133,327
Number of persons employed per fatal accident inside,	195
Number of persons employed per fatal accident outside,	.....
Number of persons employed per fatal accident inside and outside,	277
Number of persons employed per non-fatal accident inside,	123
Number of persons employed per non-fatal accident outside,	180
Number of persons employed per non-fatal accident inside and outside,	135
Number of wives made widows,	11
Number of children made orphans,	28
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	29
Number of compressed air locomotives used inside,	9
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	9
Number of electric motors used outside,	.....
Number of gasoline locomotives used inside,	2
Number of fans in use,	29
Number of furnaces in use,	.....
Number of gaseous mines in operation,	21
Number of non-gaseous mines in operation,	24
Number of new mines opened,	5
Number of old mines abandoned,	5

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh and Wilkes-Barre Coal Company,	841,199
Philadelphia and Reading Coal and Iron Company,	697,397
Dodson Coal Company,	424,319
Maryd Coal Company,	376,195
Lehigh Valley Coal Company,	296,298
Coxe Brothers and Company, Incorporated,	275,996
Mill Creek Coal Company,	125,116
East Lehigh Coal Company,	59,711
Port Carbon Coal Company,	43,063
Eastern Pennsylvania Coal Company,	31,469
Campion and Gorman,	29,090
Total,	3,199,853

Production by Counties

Schuylkill,	3,199,853

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh and Wilkes-Barre Coal Co., ...	1	.....	1	9	5	14	841,199	93,467	1,334	431	1,765	1,334	.....	148	86
Philadelphia and Reading Coal and Iron Co., ...	4	.....	4	9	2	11	174,349	77,489	1,128	502	1,630	282	.....	125	251
Dodson Coal Co., ...	2	.....	2	3	.....	3	212,159	141,439	514	288	802	257	.....	171	.....
Maryd Coal Co., ...	10	.....	10	3	1	4	37,619	125,398	373	177	550	37	.....	124	177
Lehigh Valley Coal Co., ...	4	.....	4	5	.....	5	74,074	59,259	517	151	668	129	.....	103	.....
Coxe Brothers and Co., Inc., ...	1	.....	1	2	1	3	275,996	137,998	434	111	545	434	.....	217	111
Mill Creek Coal Co., ...	.....	.....	.....	4	2	6	.....	31,279	164	162	326	.....	.....	41	81
East Lehigh Coal Co., ...	.....	.....	.....	3	.....	3	.....	19,903	77	60	137	.....	.....	25	.....
Eastern Pennsylvania Coal Co., ...	2	.....	2	.....	.....	.....	15,734	.....	30	40	70	15	.....	.....	.....
Miscellaneous Companies, ...	.....	.....	.....	.....	.....	.....	.....	.....	101	55	156	.....	.....	.....	.....
Totals and averages, ...	24	.....	24	38	11	49	133,327	84,206	4,672	1,977	6,649	195	.....	123	180

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	....	....	....	....	....	....	....	....	1	1	4.17
Falls of slate,	....	....	2	....	1	....	1	....	....	....	1	1	6	25.00
Mine cars,	...	....	...	....	....	1	....	....	1	....	....	....	2	8.33
Explosions of gas,	....	....	1	....	....	....	....	1	....	....	....	....	2	8.33
Suffocation by gas, etc.,	....	....	....	....	....	....	....	1	....	....	....	....	1	4.17
Explosions of powder and dynamite,	1	....	....	....	....	....	1	....	....	....	....	....	2	8.33
Blasts, premature and otherwise,	....	....	....	....	1	....	....	....	....	2	....	....	3	12.50
Falling into shafts,	....	....	....	....	6	....	....	....	....	....	....	....	6	25.00
Crushed at batteries,	....	....	....	....	....	1	....	....	....	....	....	....	1	4.17
Totals,	1	....	3	....	8	2	2	2	1	2	1	2	24	100.00
Outside (No Accidents)														

TABLE D.—Causes of Non-fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	1	....	....	1	1	1	....	....	....	....	....	....	4	10.53
Falls of slate,	....	....	1	....	1	....	....	....	....	2	1	2	7	18.42
Mine cars,	....	....	2	....	....	1	....	1	....	....	....	....	4	10.53
Explosions of gas,	....	....	....	1	3	1	....	....	....	2	3	....	10	26.35
Explosions of powder and dynamite,	....	....	1	....	....	....	....	....	....	....	....	....	1	2.63
Blasts, premature and otherwise,	....	....	1	1	1	....	1	....	....	1	....	....	5	13.13
Falling into shafts,	....	....	....	....	1	....	....	....	....	....	....	....	1	2.63
Falling into slopes, etc.	....	....	....	1	....	....	....	....	....	....	....	....	1	2.63
Mules,	....	....	1	....	....	1	....	....	....	....	....	....	2	5.26
By falling,	....	....	....	1	....	....	....	....	....	....	....	....	1	2.63
Struck by coal,	1	....	....	....	....	....	....	....	1	....	....	....	2	5.26
Totals,	2	....	6	5	7	4	1	1	1	5	4	2	38	100.00
Outside														
Cars,	....	....	1	....	....	....	1	1	1	....	....	3	7	63.64
Machinery,	....	....	....	....	....	....	....	....	....	1	....	....	1	9.09
By falling,	....	....	....	....	....	....	....	....	1	....	....	....	1	9.09
Struck by piece of coal	....	1	....	....	....	....	....	....	....	....	....	....	1	9.09
Struck by piece of rock	....	1	....	....	....	....	....	....	....	....	....	....	1	9.09
Totals,	....	2	1	....	....	....	1	1	2	1	....	3	11	100.00
Grand totals inside and outside,	2	2	7	5	7	4	2	2	3	6	4	5	49	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	....	1	....	7	....	2	2	....	2	1	2	17
Miners' laborers,	....	....	2	....	1	....	....	....	1	....	....	....	4
Drivers and runners,	....	....	....	....	....	1	....	....	....	....	....	....	1
Company men,	1	....	....	....	....	....	....	....	....	....	....	....	1
Starters,	....	....	....	....	....	1	....	....	....	....	....	....	1
Totals,	1	....	3	....	8	2	2	2	1	2	1	2	24
Outside (No Accidents)													

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1	....	1	4	6	2	1	1	....	4	2	1	23
Miners' laborers,	1	....	4	1	1	....	....	....	....	1	1	1	10
Drivers and runners,	....	....	1	....	....	1	....	....	....	....	....	....	2
Company men,	....	....	....	....	....	1	....	....	1	....	1	....	3
Totals,	2	....	6	5	7	4	1	1	1	5	4	2	38
Outside													
Jig runners,	....	....	....	....	....	....	....	....	....	1	....	....	1
Hitchers,	....	....	....	....	....	....	....	1	....	....	....	....	1
Topmen,	....	....	....	....	....	....	....	....	....	....	....	1	1
Slatepickers (boys),	....	....	....	....	....	....	....	....	1	....	....	....	1
Patchers,	....	....	....	....	....	....	....	....	1	....	....	1	2
Miners,	....	1	....	....	....	....	....	....	....	....	....	....	1
Laborers,	....	1	1	....	....	....	1	....	....	....	....	1	4
Totals,	....	2	1	....	....	....	1	1	2	1	....	3	11
Grand totals inside and outside,	2	2	7	5	7	4	2	2	3	6	4	5	49

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	....	....	....	....	1	....	....	....	....	....	1
German,	....	....	....	....	1	....	....	....	....	....	....	....	1
Polish,	....	....	....	....	2	....	....	1	....	1	....	1	5
Slavonian,	1	....	1	....	2	....	1	....	1	....	....	....	6
Lithuanian,	....	....	2	....	1	1	....	1	....	....	1	1	7
Austrian,	....	....	....	....	1	....	....	....	....	....	....	....	1
Greek,	....	....	....	....	1	1	....	....	....	....	....	....	2
Tyrolean,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	1	....	3	....	8	2	2	2	1	2	1	2	24

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	1	....	....	1	1	1	1	....	....	1	6
Welsh,	....	....	....	....	1	....	....	....	....	....	....	....	1
German,	....	....	1	1	2	....	....	....	....	....	....	....	4
Polish,	1	....	....	1	2	3	1	....	1	2	3	1	15
Hungarian,	....	....	....	....	....	....	....	....	1	....	....	1	2
Italian,	....	2	1	....	....	....	....	....	....	....	....	1	4
Slavonian,	....	....	1	2	1	....	....	1	....	2	....	1	8
Lithuanian,	1	....	....	....	1	....	....	....	....	2	....	....	4
Russian,	....	....	2	....	....	....	....	....	....	....	....	....	2
Greek,	....	....	1	....	....	....	....	....	....	....	....	....	1
French,	....	....	....	....	....	....	....	....	....	....	1	....	1
Tyrolean,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	2	2	7	5	7	4	2	2	3	6	4	5	49

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Lehigh and Wilkes-Barre Coal Co.																
Audenried No. 4 Colliery:																
Audenried No. 4, ...	Slope, ...	Gaseous, ..	Fan, ...	16	4.2	3.8	100	.8	Guibal, ..	Steam, ...	..	8	119,000	119,000	126,800	722
Audenried No. 11, ...	Slope, ...	Gaseous, ..	Fan, ...													
Audenried No. 16, ...	Slope, ...	Gaseous, ..	Fan, ...	12	4.	3.6	75	.5	Guibal, ..	Steam, ...	..	2	41,100	44,100	44,000	
Audenried Nos. 21 and 23,	Slope, ...	Gaseous, ..	Fan, ...	15	4.6	5.	78	.5	Guibal, ..	Steam, ...	..	3	47,500	47,500	51,500	
Honey Brook No. 5 Colliery:																
Honey Brook No. 15, ...	Slope, ...	Gaseous, ..	Fan, ...	15	4.4	4.4	84	.8				4	53,700	53,700	56,150	
Honey Brook No. 22, ...	Slope, ...	Non-gas., .	Fan, ...	8	3.6	3.6	50	.5				1	7,500	7,500	8,250	
Honey Brook No. 20, ...	Slope, ...	Non-gas.,	Fan, ...	8	2.10	2.3	122	.8				3	34,250	34,250	36,190	
Honey Brook Green Mountain, ...	Slope, ...	Non-gas., .	Fan, ...	15	4.2	4.6	62	.7	Guibal, .	Steam, ...		4	51,550	51,550	53,850	489
Honey Brook Water Level Tunnel, ...	Drift, ...	Non-gas., .	Fan, ...	12	4.	3.6	60	.5				2	27,000	27,000	27,000	
Honey Brook No. 8 South,	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....				..	.....	.....	.....	
												10				
Philadelphia and Reading Coal and Iron Co.																
Silver Creek Colliery:																
Silver Creek, ...	Shaft, ...	Gaseous, ..	Fan, ...	21	6.0	7.0	61	.7	Guibal, ..	Steam, ...	..	9	170,000	175,000	180,000	559
				21	6.2	7.0	65	1.4	Guibal, ..	Steam, ...	..	10				

Silver Creek No. 1, ...	Drift, ...	Non-gas., .	Natural,..													5
Silver Creek No. 2, ...	Drift, ...	Non-gas., .	Natural,..													13
Silver Creek No. 3, ...	Drift, ...	Non-gas., .	Natural,..													8
Silver Creek No. 4, ...	Drift, ...	Non-gas., .	Fan., ...													135
Silver Creek No. 9, ...	Drift, ...	Non-gas., .	Natural,..	12	4.	3.6	62	2.	Guibal, ..	Electricity,	..	8	70,023	70,023	71,125	15
Silver Creek No. 11, ...	Drift, ...	Non-gas., .	Natural,..													6
Silver Creek No. 12, ...	Drift, ...	Non-gas., .	Natural,..													9
Silver Creek No. 14, ...	Drift, ...	Non-gas., .	Natural,..													7
Silver Creek No. 15, ...	Drift, ...	Non-gas., .	Natural,..													6
Eagle Hill Colliery:																
Eagle Hill No. 1, ...	Slope, ...	Gaseous, ..	Fan, ...	18	5.	6.	75	1.3	Guibal, ..	Steam,.....	..	19	125,000	125,000	145,000	385
Eagle Hill No. 2, ...	Shaft,.....	Gaseous, ..														
Eagle Hill No. 7, ...	Drift, ...	Non-gas., .	Fan, ...	8	2.11	2.4	80	.6	Guibal, ..	Electricity,	..	1	12,000	12,000	17,500	11
Eagle Hill No. 4, ...	Drift, ...	Gaseous, ..	Fan, ...	12	4.	3.7	104	1.5	Guibal. ..	Electricity,	..	5	36,500	36,500	38,000	60
Dodson Coal Co.																
Morea Colliery:																
Morea, ...	Slope, ...	Gaseous, ..	Fan, ...	18	6.10	6.	80	1.	Guibal, ..	Electricity,		.	*45,570	*45,570	136,500	514
Morea, ...	Shaft,.....	Gaseous, ..	Fan, ...	18	6.10	6.	80	.9	Guibal, ..	Steam,.....						
Maryd Coal Co.																
Maryd Colliery:																
Maryd, ...	Shaft,.....	Gaseous, ..	Fan, ...	20	6.	6.	80	2.				2	80,000	80,000	85,000	193
			Fan, ...	18	6.	5.	70	1.75				2	42,240	42,240	45,000	60
			Fan, ...	16	4.2	4.9	65	1.75	Guibal,	Steam,.....		2	22,000	22,000	23,000	40
			Fan, ...	16	4.	5.	80	1.8				1	30,000	30,000	32,000	80
Lehigh Valley Coal Co.																
Buck Mountain Colliery:																
Buck Mountain No. 1, ..	Slope, ...	Gaseous, ..	Fan, ...	20	6.8	6.0	70	1.0	Guibal, ..	Steam,.....	..	10	116,000	77,000	116,000	256
Buck Mountain No. 3, ..	Slope, ...	Gaseous, ..														
Buck Mountain, Vulcan,.	Slope, ...	Gaseous, ..	Fan, ...	25	8.0	6.3	65	1.6	Guibal, ..	Steam,.....	..	13	97,000	45,000	97,000	261
Coxe Brothers and Co., Inc.																
Oneida Colliery:																
Oneida, ...	Shaft, ...	Gaseous, ..	Fan, ...	12.6	5.3	5.10	150	.7	Pelzer, ..	Steam,.....	..	8	70,000	55,000	72,000	142
Oneida No. 1, ...	Slope, ...	Gaseous, ..	Fan, ...													
Oneida No. 3, ...	Slope, ...	Non-gas., .	Fan, ...	20	6.	6.6	65	.42	Guibal, ..	Steam,.....	..	4	55,700	48,100	62,000	93
Oneida No. 4, ...	Slope, ...	Non-gas., .	Fan, ...	20	6.	5.9	60	.5	Guibal, ..	Steam,.....	..	5	42,100	32,700	44,000	84
Mill Creek Coal Co.																
Middle Lehigh Colliery:																
Middle Lehigh No. 3, ..	Slope, ...	Gaseous, ..	Fan, ...	16	4.5	4.1	80	.4	Guibal, ..	Steam,.....	..	6	70,400	51,200	80,900	80
Middle Lehigh No. 11, ..	Slope, ...	Non-gas., .														36
Middle Lehigh No. 6, ..	Slope, ...	Non-gas., .	Natural,..	.....	.....	.....	.....	.....	.....	.....	..	..	.....	.....	.....	4
Middle Lehigh No. 12, ..	Slope, ...	Non-gas., .	Natural,..	.....	.....	.....	.....	.....	.....	.....	..	..	.....	.....	.....	3
Middle Lehigh Wolf Creek, ...	Drift, ...	Non-gas., .	Natural,..	.....	.....	.....	.....	.....	.....	.....	..	..	.....	.....	.....	19
Middle Lehigh Wolf Creek, ...	Slope, ...	Non-gas., .	Natural,..	.....	.....	.....	.....	.....	.....	.....	..	..	.....	.....	.....	16

*Several intakes from breach holes to the surface.

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
East Lehigh Coal Co.																
East Lehigh Colliery:																
East Lehigh, ...	Slope, ...	Gaseous, ..	Fan, ... Fan, ...	10 14	3. 4.	3.3 4.	91 95	.5 .5	Guibal, .. Guibal, ..	Steam, ... Steam, ...	~~ ~~	2 ~~	20,000 ~~	20,000 ~~	22,000 ~~	76 ~~
Port Carbon Coal Co.																
Lucy R. Colliery:																
Lucy R., ...	Drift, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	..	.....	.....	.....	51
Eastern Pennsylvania Coal Co.																
Silver Hill Colliery:																
Silver Hill, ...	Drift, ...	Gaseous, ..	Fan, ...	12	4.	4.	100	1.75	Brazilian,	Steam, ...	..	1	10,000	10,000	10,500	30
Silver Hill, ...	Slope, ...	Gaseous, ..	Fan, ...													
Campion and Gorman																
Bell Colliery:																
Bell, ...	Slope, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	..	.....	.....	.....	48

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh and Wilkes-Barre Coal Co. Audenried No. 4, ... Honey Brook No. 5, ...	Schuylkill, ...	C. F. Huber, ... General Manager,	Wilkes-Barre, ...	Walter Fahringer, ..	Audenried, ...	C. R. R. of N. J.
Philadelphia and Reading Coal and Iron Co. Silver Creek, ... Eagle Hill, ...	Schuylkill, ...	G. B. Hadesty, ...	Pottsville, ...	Reese Tasker, ... Mining Supt. Claude F. Lewis, .. Division Supt. David Jones, ... Inside Dist. Supt. William Tiley, ... Outside Dist. Supt.	Pottsville, ... Pottsville, ... Pottsville, ... Pottsville, ...	P. and R.
Dodson Coal Co. Morea, ...	Schuylkill, ...	J. B. Connell, ...	Beaver Brook, ...	William A. McGinley,	Morea, ...	Penna., L. V. and P. and R.
Maryd Coal Co. Maryd, ...	Schuylkill, ...	T. E. Snyder, ...	Hazleton, ...	Arthur Kennedy, ...	Maryd, ...	P. and R. and C. R. R. of N. J.
Lehigh Valley Coal Co. Buck Mountain, ...	Schuylkill, ...	Thomas Thomas, ...	Wilkes-Barre, ...	Thomas R. Jones, ..	Mahanoy City, ...	Lehigh Valley
Coxe Brothers and Co., Inc. Oneida, ...	Schuylkill, ...	Thomas Thomas, ...	Wilkes-Barre, ...	William H. Davies, .	Hazleton, ...	Lehigh Valley
Mill Creek Coal Co. Middle Lehigh, ...	Schuylkill, ...	T. D. Jones, ...	New Boston, ...	J. E. Jones, ...	New Boston, ...	Penna. and L. V.
East Lehigh Coal Co. East Lehigh, ...	Schuylkill, ...	E. M. B. Shepp, ...	Tamaqua, ...	E. M. B. Shepp, ...	Tamaqua, ...	Lehigh and New England
Port Carbon Coal Co. Lucy R., ...	Schuylkill, ...	D. J. Slattery, ...	Port Carbon, ...	Samuel Moore, ...	Port Carbon, ...	P. and R.
Eastern Pennsylvania Coal Co. Silver Hill, ...	Schuylkill, ...	Ernest P. Fink, ...	Middleport, ...	Ernest P. Fink, ...	Middleport, ...	P. and R.
Campion and Gorman Bell, ...	Schuylkill, ...	D. J. Slattery, ...	Tuscarora, ...	D. J. Slattery, ...	Tuscarora, ...	P. and R.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Lehigh and Wilkes-Barre Coal Co.													
Audenried No. 4,	Schuylkill,	415,421	77,325	4,263	497,009	248	927	1	12	48,975	214,519	28,325	81
Strippings,							40						
Honey Brook No. 5,	Schuylkill,	325,765	18,425	.....	344,190	245	621	.....	2	19,425	166,520	4,241	55
Strippings,							83						
Miscellaneous,							94						
Totals,		741,186	95,750	4,263	841,199	....	1,765	1	14	68,400	381,039	32,566	136
Philadelphia and Reading Coal and Iron Co.													
Silver Creek,	Schuylkill,	394,798	28,493	5,015	428,306	223	993	2	8	30,750	109,680	101,710	76
Eagle Hill,	Schuylkill,	238,676	26,535	3,880	269,091	226	637	[illegible]	3	3,400	47,474	41,442	45
Totals,		633,474	55,028	8,895	697,397	....	1,630	4	11	34,150	157,154	143,152	121
Dodson Coal Co.													
Morea,	Schuylkill,	382,994	40,350	975	424,319	304	802	2	3	52,500	164,275	.....	49
Maryd Coal Co.													
Maryd,	Schuylkill,	328,001	45,783	2,411	376,195	193	550	10	4	350	88,397	61,903	59
Lehigh Valley Coal Co.													
Buck Mountain,	Schuylkill,	252,756	42,611	931	296,298	234	668	4	5	110,725	31,077	88,563	66
Coxe Brothers and Co., Inc.													
Oneida,	Schuylkill,	254,071	18,143	3,782	275,996	250	545	1	3	45,800	148,698	.....	64

Mill Creek Coal Co.														
Middle Lehigh,	Schuylkill, ...	101,891	23,225	.....	125,116	246	326	.....	6	46,400	18,795	.....	36
East Lehigh Coal Co.														
East Lehigh,	Schuylkill, ...	36,878	10,700	12,133	59,711	280	137	.....	3	.....	21,525	.....	14
Port Carbon Coal Co.														
Lucy R.,	Schuylkill, ...	42,255	540	268	43,063	243	76	.....	.....	.....	12,780	.....	6
Eastern Pennsylvania Coal Co.														
Silver Hill,	Schuylkill, ...	27,504	3,600	365	31,469	212	70	2	.....	.....	14,600	.....	5
Campion and Gorman														
Bell,	Schuylkill, ...	27,088	1,500	502	29,090	191	80	.....	.....	.....	.....	15,000	7
Grand totals,	.....	2,828,098	337,230	34,525	3,199,853	....	6,649	24	49	358,325	1,038,340	341,184	563

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Lehigh and Wilkes-Barre Coal Co.,	Schuylkill,	20	700	51	5,705	6,405	..	9	....	1	46	5,175	9	18,600	9,745	2	3
Philadelphia and Reading Coal and Iron Co.,		.....	.....	22	3,620	3,620	..	5	3	1	66	9,502	4	5,061	1,749	2	4
Dodson Coal Co.,		.....	.....	23	2,255	2,255	.	1	....	5	19	2,003	5	10,000	4,000	1	2
Maryd Coal Co.,		.....	.....	11	1,800	1,800	2	2	....	....	16	2,450	5	5,000	1,500	.....	1
Lehigh Valley Coal Co.,		.....	.....	7	2,100	2,100	..	3	3	....	31	6,510	2	5,000	3,000	1	2
Coxe Brothers and Co., Inc.,		.....	.....	23	3,800	3,800	..	3	3	....	20	2,750	7	5,920	3,570	.....	5
Mill Creek Coal Co.,		.....	.....	23	2,750	2,750	..	5	....	....	14	1,900	6	8,150	1,600	.....	1
East Lehigh Coal Co.,		.....	.....	3	650	650	..	....	....	...	10	567	2	800	400	.....	2
Port Carbon Coal Co.,		.....	.....	2	150	150	..	....	....	2	....	50	....	.....	.....	1	.....
Eastern Pennsylvania Coal Co.,		*1	90	4	260	350	..	2	....	....	7	265	1	700	300	1	.....
Campion and Gorman,		.....	.....	2	350	350	..	....	....	....	7	200	....	.....	.....	.....	1
Totals,	.....	21	790	171	23,440	24,230	2	30	9	9	236	31,372	41	59,231	25,864	8	21

*Portable.

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh and Wilkes-Barre Coal Co.,	Schuylkill,	3	7	5	370	232	70	41	17	259	330	1,334	3	7	36	73	74	1	5	232	431	1,765
Philadelphia and Reading Coal and Iron Co.,		3	18	....	488	172	73	1	2	64	307	1,128	....	5	30	50	90	14	8	305	502	1,630
Dodson Coal Co.,		1	1	5	115	76	33	5	6	61	211	514	1	1	26	35	24	18	4	179	288	802
Maryd Coal Co.,		1	2	9	176	104	17	4	2	47	11	373	1	2	14	27	24	....	3	106	177	550
Lehigh Valley Coal Co.,		2	16	....	283	97	36	8	2	11	62	517	1	1	16	21	....	6	4	102	151	668
Coxe Brothers and Co., Inc.,		2	7	....	220	37	28	7	1	40	92	434	....	1	7	22	...	....	4	77	111	545
Mill Creek Coal Co.,		2	1	1	86	32	15	1	6	13	7	164	1	2	14	32	10	7	5	91	162	326
East Lehigh Coal Co.,		1	....	1	26	25	7	1	2	9	5	77	1	1	1	7	12	1	1	36	60	137
Port Carbon Coal Co.,		1	...	....	26	4	4	3	....	14	.....	52	....	1	2	2	7	....	.....	12	24	76
Eastern Pennsylvania Coal Co.,		1	1	....	8	2	4	1	2	8	3	30	1	1	2	8	10	....	1	17	40	70
Campion and Gorman,		1	....	1	24	9	5	....	....	9	.....	49	1	1	2	3	3	2	.....	19	31	80
Totals,		19	53	22	1,822	790	292	72	40	535	1,028	4,672	10	23	150	280	254	49	35	1,176	1,977	6,649

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Lehigh and Wilkes-Barre Coal Co.,	Schuylkill,	22	15	20	22	23	22	14	16	25	25	24	18	246
Philadelphia and Reading Coal and Iron Co.,		20	16	17	22	24	18	15	16	19	20	20	17	224
Dodson Coal Co.,		26	24	26	25	26	26	25	25	25	26	25	26	304
Maryd Coal Co.,		11	15	18	18	18	15	16	19	18	17	13	15	193
Lehigh Valley Coal Co.,		14	12	13	23	23	24	17	17	24	26	20	21	234
Coxe Brothers and Co., Inc.,		14	10	24	23	24	25	17	18	25	26	21	23	250
Mill Creek Coal Co.,		20	13	20	21	21	18	19	20	25	23	22	24	246
East Lehigh Coal Co.,		26	23	24	23	25	26	26	23	13	24	24	23	280
Port Carbon Coal Co.,		24	21	19	20	12	21	18	21	24	25	24	14	243
Eastern Pennsylvania Coal Co.,		24	22	17	17	22	19	15	11	11	18	17	19	212
Campion and Gorman,		16	14	18	15	16	16	17	16	16	16	16	15	191

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 20	John Rashnock, ...	Slavonian, .	Company man, ...	24	S.	....	....	Silver Hill, ...		Fatally injured by explosion of dynamite, while loading a car out of a chute, five sticks, of dynamite, with a lighted fuse attached, rolled down the chute to where he was standing and exploded. Died January 28.
March 2	Stephen Litcavage. ..	Lithuanian,	Miner's laborer, .	22	S.	....	....	Silver Creek, ...		Fatally injured by fall of slate at face of gangway. Died March 8.
18	Charles Rowan, ...	Slavonian, .	Miner's laborer, .	25	M.	1	....	Maryd, ...		Killed by fall of top slate at face of gangway.
26	Frank Brasdzus, ...	Lithuanian,	Miner, ...	35	M.	1	3	Silver Creek, ...		Fatally injured by explosion of gas at face of breast. Died April 3.
May 11	Anthony Pritchgo, ..	Polish, ...	Miner's laborer, .	20	S.	....	....	Morea, ...		Killed by fall of slate on gangway.
23	John Molsein, ...	Greek.....	Miner, ...	56	M.	1	....	Audenried No. 4, ..	Schuylkill,	Fatally injured by blast at face of breast. Died the same day.
29	Martin Wychofsky,	Slavonian, .	Miner, ...	36	M.	1	3	Maryd, ...		Killed by falling down shaft. The engineer pulled the cage beyond the regular landing until it struck the sheave wheel over the shaft, throwing the men down the shaft a distance of 624 feet.
	William Petrusky, .	Lithuanian,	Miner, ...	22	S.	....	....			
	Thomas Novack, ...	Slavonian, .	Miner, ...	56	S.	....	....			
	Joseph Shelinsky, .	Polish, ...	Miner, ...	36	M.	1	4			
	Leopold Kodorsky, .	Austrian, ...	Miner, ...	34	M.	1	5			
	Henry Wicker, ...	German, ...	Miner, ...	55	M.	1	2			
June 15	Anthony Ganunis, ..	Lithuanian,	Driver, ...	20	S.	....	....	Maryd, ...		Fatally injured by being caught between mine car and low side on gangway. Died the same day.
25	William Lenick, ...	Greek.....	Starter, ...	21	S.	....	....	Silver Hill, ...		Killed by rush of coal from battery. In starting the battery at Monkey heading he fell down the chute and fine coal rushed from the battery and smothered him.
July 6	Charles Dillon, ...	American, ..	Miner, ...	28	S.	....	....	Morea, ...		Killed by fall of slate while drilling hole in bottom bench under the dividing slate at face of cross-cut.
14	Frank Oldinsky, ...	Slavonian, .	Miner, ...	49	M.	1	5	Maryd, ...		Killed by explosion of dynamite in heading.
Aug. 5	John Fitzcavage, ...	Lithuanian,	Miner, ...	32	M.	1	1	Eagle Hill, ...		Smothered by gas in blank heading near face of breast.

TABLE 4—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Aug. 26	Joseph Mertunus, ...	Polish, ...	Miner, ...	48	M.	1	4	Maryd, ...	Schuylkill,	Fatally injured. He and his partner were timbering the Monkey heading when another employe took off the bottom of his safety lamp and ignited a small body of gas, burning the three men. In going down the manway to the gangway Mertunus fell from the chute to the gangway a distance of 8 or 9 feet. He walked out the gangway a short distance and died.
Sept. 15	John Onofry, ...	Slavonian, .	Miner's laborer.	22	S.	....	....	Buck Mountain, ...		Killed by being run over by cars on gangway.
Oct. 6	Vincent Swartze, ...	Tyrolean, ...	Miner, ...	28	S.	....	....	Oneida, ...		Fatally injured by blast at face of breast. Died October 7.
30	Andrew Vitcher, ...	Polish, ...	Miner, ...	27	S.	....	....	Buck Mountain, ...		Killed by premature blast at face of gangway.
Nov. 24	Mike Dubitsky, ...	Lithuanian,	Miner, ...	27	S.	....	....	Buck Mountain, ...		Killed by fall of slate at face of breast.
Dec. 1	Thomas Dedinsky, ..	Lithuanian,	Miner, ...	50	M.	1	1	Eagle Hill, ...		Killed by fall of top coal at face of breast.
10	Andrew Socklosky, ..	Polish, ...	Miner, ...	43	S.	....	....	Buck Mountain, ...		Killed by fall of slate 15 feet in advance of the face of chute while robbing pillars.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	John Yuat, ...	Lithuanian,	Miner's laborer, .	32	S.	Morea, ...	Schuylkill,	Leg fractured above the knee by fall of coal from rib in gangway.
21	Phillip Stetze, ...	Polish, ...	Miner, ...	52	M.	Middle Lehigh, ...		Two ribs broken while robbing pillar in No. 4 East top split Counter, a piece of coal rolled down from an old gangway and struck him.
Feb. 26	Jerry Lourey, ...	Italian, ...	Laborer, ...	36	M.	Audenried No. 4, ..		Rib fractured by being struck by a piece of rock in stripping. Outside.
27	Angelo Sack, ...	Italian, ...	Miner, ...	45	M.	Honey Brook No. 5,		Leg fractured while preparing a blast in stripping, a piece of rock slid down a distance of 15 feet and struck him. Outside.
March 2	John Kohut, ...	Russian, ...	Miner.	32	S.	Audenried No. 4, ..		Compound fracture of leg by fall of slate at face of breast.
4	John Burns, ...	American, ..	Driver, ...	23	S.	Maryd, ...		Rib broken and otherwise injured by being kicked by a mule on gangway.
5	Charles Washute, ...	Greek, ...	Miner's laborer, .	22	M.	Eagle Hill, ...		Severe lacerations of face and body by explosion of blast at face of gangway.
5	Joseph Laplock, ...	Italian, ...	Laborer, ...	39	M.	Silver Creek, ...		Leg fractured by being run over by car. Outside.
9	Frank Gustwa, ...	Slavonian, .	Miner's laborer, .	29	M.	Silver Creek, ...		Leg fractured by being caught between car and low side of gangway.
12	William Mellon, ...	German, ...	Miner's laborer, .	19	S.	Buck Mountain, ...		Arm lacerated by being caught between top of mine car and top rock in gangway.
16	Adam Oseravage, ...	Russian, ...	Miner's laborer, .	26	M.	Audenried No. 4, ..		Hands and face burned by powder. He placed some loose powder on top of a keg containing powder and ignited it with his lamp.
April 4	Joseph Morecavage, .	Polish, ...	Miner's laborer, .	23	S.	Morea, ...		Compound fracture of leg. A piece of coal fell off the pillar at face of breast and struck him.
8	Stiney Matula, ...	German, ...	Miner, ...	38	M.	Eagle Hill, ...		Hands and face burned by gas. He went up in chute to load a car and ignited gas that had accumulated between battery and gangway.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
April 9	Stiney Crane, ...	Slavonian, .	Miner, ...	60	M.	Audenried No. 4, ..	Schuylkill,	Ribs fractured by falling from chute to gangway while retreating from blast in face of breast.
17	Joseph Kasperette, ..	Tyrolean, ...	Miner, ...	36	M.	Oneida, ...		Head and shoulder bruised by falling down manway from face of breast, a distance of 70 feet.
22	Joseph Balinsky, ...	Slavonian, .	Miner, ...	29	M.	Audenried No. 4, ..		Hips crushed and back bruised. Struck by coal from blast in face of gangway.
May 1	Joseph Kostosek, ...	Polish, ...	Miner, ...	57	M.	Audenried No. 4, ..		Arm broken and body injured by fall of dividing slate at face of breast.
5	John Bryant, ...	Welsh, ...	Miner, ...	33	M.	East Lehigh, ...		Hands and body burned by gas. He went up to the face of breast with a naked lamp, after firing a blast.
	Edward Boettger, ...	German, ...	Miner, ...	56	M.	East Lehigh, ...		Hands and face burned by gas. He went up to the face of breast with a naked lamp, after firing a blast.
7	Andrew Moraz, ...	Lithuanian,	Miner, ...	29	S.	Silver Creek, ...		Hands and face burned by gas. He left his safety lamp in the heading and went up to face of breast with a naked lamp, and ignited the gas.
12	George Snyder, ...	German, ...	Miner, ...	27	M.	Buck Mountain, ...		Arm broken by being struck by a piece of flying coal from a shot while sitting in the heading.
13	Cost Barchinsky, ...	Polish, ...	Miner's laborer, .	36	M.	Eagle Hill, ...		Leg fractured by being struck by a piece of coal at face of chute.
29	George Dorwige, ...	Slavonian, .	Miner, ...	44	S.	Maryd, ...		Compound fracture of leg. The cage was taken beyond its regular stopping place, and struck the timber supporting the head sheave of the shaft, throwing him into the dump chute.
June 15	Mike Gribush, ...	Polish, ...	Miner, ...	40	M.	Middle Lehigh, ...		Leg and hand lacerated by being struck by a piece of coal that fell off the pillar at face of chute.
19	John Tansy, ...	American, ..	Driver, ...	37	S.	Buck Mountain, ...		Arm broken by being kicked by mule on gangway.

June	22	Stephen Mluner, ...	Polish, ...	Company man, ...	35	S.	Audenried No. 4, ..			Leg cut by being struck by a piece of slate while loading mine car out of chute.
	24	Michael Musko, ...	Polish, ...	Miner, ...	34	M.	Buck Mountain, ...			Face and hands burned by gas. He ignited gas that had accumulated where the top coal fell from, in counter chute.
July	8	John Garber, ...	Polish, ...	Miner, ...	41	M.	Middle Lehigh, ...			Face and head cut by flying coal from blast in heading.
	27	Felix Sharp, ...	American, ..	Laborer, ...	40	S.	Silver Creek, ...			Leg cut above and below the knee. Caught between empty mine cars on top of plane. Outside.
Aug.	23	Frank Kershner, ...	Slavonian, .	Hitcher, ...	17	S.	Maryd, ...			Compound fracture of leg and three ribs broken. After unhitching the chain from a trip of cars on bottom of plane he fell and was dragged by the cars. Outside.
		Michael Connors, ...	American, ..	Miner, ...	52	M.	Middle Lehigh, ...			Arm fractured by being caught between mine car and timber while riding up slope.
Sept.	22	Edgar Schafer, ...	American, ..	Patcher, ...	25	S.	Oneida, ...			Knee severely bruised. Caught in bumper of mine car near breaker. Outside.
	24	Michael Onesko, ...	Polish, ...	Company man.	24	S.	Audenried No. 4, ..			Shoulder broken by being struck by a piece of coal that rolled down the slope.
		Louis Haberia, ...	Hungarian,	Slater, ...	17	S.	Audenried No. 4, ..			Forearm broken. He fell off a piece of timber to the floor in breaker, a distance of 4 feet. Outside.
Oct.	15	William Daberlosky,	Lithuanian,	Miner, ...	53	M.	Maryd, ...			Pelvis injured by fall of slate at face of breast.
	16	Anthony Gottivinsky,	Lithuanian,	Miner, ...	33	S.	Silver Creek, ...			Face burned by gas at face of breast.
	19	John Rocovitch, ...	Polish, ...	Miner, ...	34	M.	Silver Creek, ...	Schuylkill,		Hands and face burned by gas at face of breast.
	27	Andrew Bayuse, ...	Slavonian, .	Miner, ...	50	M.	Oneida, ...			Leg fractured by fall of slate at face of breast.
	30	Michael Genosure, ...	Slavonian, .	Jig-runner, ...	16	S.	Middle Lehigh, ...			Arm crushed. Caught in the disc wheel in breaker. Outside.
		Surga Losney, ...	Polish, ...	Miner's laborer, .	21	S.	Buck Mountain, ...			Scalp wounded and three fingers cut by rock flying from premature blast in gangway.
Nov.	14	Christen Walters, ...	French, ...	Company man, ...	19	S.	East Lehigh, ...			Face burned by gas, while loading a car out of chute. Gas accumulated while he was on gangway eating his lunch.
	16	Michael Burda, ...	Polish, ...	Miner's laborer, .	21	S.	Morea, ...			Compound fracture of leg by piece of slate falling on him at face of gangway.
	18	Leo Strause, ...	Polish, ...	Miner, ...	37	M.	Silver Creek, ...			Hands and face burned by gas. Strause opened his safety lamp at face of chute and ignited gas that was standing there.
		Frank Benesky, ...	Polish, ...	Miner, ...	36	M.				
Dec.	1	John Shisko, ...	Hungarian,	Topman, ...	17	S.	Honey Brook No. 5,			Hand crushed. After unhitching the chain from the car on top of slope he let it drop in the center of the track and while picking it up his hand was caught between the wheel of the car and the chain. Outside.
	10	James Cooper, ...	Italian, ...	Patcher, ...	24	S.	Audenried No. 4, ..			Leg crushed by being caught between two loaded cars on rock bank. Outside.
	22	Stanley Miller, ...	Polish, ...	Miner's laborer, .	28	M.	Audenried No. 4, .			Leg fractured by fall of slate from high side of gangway.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Dec. 24	John Heeney, ...	American, ..	Laborer, ...	20	S.	Middle Lehigh, ...	Schuylkill,	Collar bone broken. Caught between mine car and shed on which he was nailing strips. Outside.
28	Peter Comitz, ...	Slavonian, .	Miner.	31	M.	Audenried No. 4, ..		Back and shoulder contused. He fired a blast in face of breast. He returned to the face of breast and while in the act of examining it a piece of dividing slate fell on him.

CONDITION OF COLLIERIES

LEHIGH AND WILKES-BARRE COAL COMPANY

Audenried No. 4.—Ventilation, drainage and condition as to safety, good.

Honey Brook No. 5.—Ventilation, drainage and condition as to safety, good.

PHILADELPHIA AND READING COAL AND IRON COMPANY

Silver Creek.—Ventilation, drainage and condition as to safety, good.

Eagle Hill.—Ventilation, drainage and condition as to safety, good.

DODSON COAL COMPANY

Morea.—Ventilation, drainage and condition as to safety, good.

MARYD COAL COMPANY

Maryd.—Ventilation, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Buck Mountain.—Ventilation, drainage and condition as to safety, good.

COXE BROTHERS AND COMPANY, INCORPORATED

Oneida.—Ventilation, drainage and condition as to safety, good.

MILL CREEK COAL COMPANY

Middle Lehigh.—Ventilation, drainage and condition as to safety, good.

EAST LEHIGH COAL COMPANY

East Lehigh.—Ventilation, drainage and condition as to safety, good.

PORT CARBON COAL COMPANY

Lucy R.—Ventilation, fair. Drainage, bad. Condition as to safety, good.

EASTERN PENNSYLVANIA COAL COMPANY

Silver Hill—Ventilation, fair. Drainage, bad. Condition as to safety, good.

CAMPION AND GORMAN

Bell.—Ventilation, drainage and condition as to safety, good.

IMPROVEMENTS

LEHIGH AND WILKES-BARRE COAL COMPANY

Audenried No. 4 Colliery.—Rock turnout and tunnel driven at No. 21 slope, from Buck Mountain to Lykens vein.

Electric installation of No. 16 slope including 100-H. P. hoist, fan, and 7½ by 12 inch horizontal duplex plunger pump.

Tunnel driven, Lykens to Gamma vein, shaft basin.
Concrete ash duct from No. 4 boiler house to No. 4 stripping.

PHILADELPHIA AND READING COAL AND IRON COMPANY

Silver Creek Colliery.—The fireproof stable of concrete and steel on No. 4 plane, mentioned in last year's report, has been completed. The 300 K. W. generator and engine, mentioned in last year's report, has been completed, with feeder lines supplying houses and buildings around Silver Creek Colliery. Also feeder lines built to Eagle Hill Colliery.

The gangway on the Seven Foot vein, mentioned in last year's report, to tap Windy Harbor water, starting from No. 11 water hole driven from the West Skidmore, No. 4 plane, has been completed, at a distance of 285 feet. A diamond drill will be placed at face of gangway and the water will be tapped through the rock by a series of holes.

Tunnel driven from the Bottom Split to the Top Split vein, No. 12 Drift; length, 178 feet.

Tunnel driven from the East Seven Foot to the Skidmore vein, No. 4 Drift, a distance of 85 feet.

Tunnel driven from the Middle Split to the Top Split vein, No. 4 Plane Level, a distance of 72 feet.

Tunnel driven from the Middle Split to the Bottom Split vein, No. 5 Plane; length, 152 feet.

Tunnel driven from the East Skidmore to the Bottom Split vein, No. 4 Drift, a distance of 39 feet.

Tunnel driven from the bottom slate of Bottom Split vein to the Skidmore vein, No. 5 Plane; length, 62 feet.

A wing tunnel has been driven west; length, 44 feet.

A tunnel is being driven from the East Bottom Split to the Top Split vein, No. 4 Drift; estimated length, 171 feet.

A tunnel is also being driven from the West Top Split, South dip, to the Holmes vein, No. 4 Drift; estimated length, 225 feet.

No. 3 Plane on the Top Split has been abandoned and the coal is being hoisted from No. 3 Plane landing.

A new drift, No. 15, has been started on the Skidmore vein.

Drift No. 10 on Top Split vein and Drift No. 14 on Skidmore vein have been finished and robbed.

Two return tubular boilers have been installed in the main boiler plant.

A 6-inch cast iron fresh water line is being constructed from the Palmer vein dam to connect with Main 6-inch line to the colliery; estimated length, 2,300 feet.

An electric motor has been installed at saw mill.

Eagle Hill Colliery.—The No. 4 Drift tunnel has been driven northward from the Top Split of Mammoth to the Skidmore vein, a distance of 158 feet, cutting the Bottom Split of Mammoth.

Tunnel driven northward from East Big Diamond gangway, No. 7 Drift, between Nos. 9 and 10 chutes, to the Little Orchard vein, a distance of 54 feet; and gangways are being turned east and west.

Tunnel driven on the 5th Lift from No. 18 chute on East Holmes gangway, northward to the Primrose vein, a distance of 121 feet; and gangway has been turned east.

Rock airway 72 feet long driven on 5th Lift from Monkey heading at No. 19 chute on East Holmes gangway, to the Primrose vein, taking care of return air from the Primrose gangway.

The Orchard North Dip gangway, No. 4 Drift, has been driven east to the surface and is now used as the main haulage from the drift.

The tunnel from the Primrose gangway has been abandoned. The entrance to the drift has been concreted a distance of 50 feet from the mouth.

A new landing is being turned, at an elevation of 600 feet above tide, in the hoisting shaft.

The airway and waterway, ventilating and draining the 5th Lift, mentioned in last year's report, has been completed.

The 27 by 50 by 12 by 48-inch compound duplex pump mentioned in last year's report has been finished and is in operation. This pump has a vertical lift 1,038 feet.

A pipe line and trough has been laid from the shaft to the breaker pump. The water from the inside workings is pumped from the 6th Lift to the top of shaft and runs by gravity to a small dam at Colliery office. It is then pumped into the breaker, where it is used in the preparation of coal.

A pole line has been erected to No. 4 Drift fan, and an electric motor installed in fan house, which is at surface of No. 1 chute in West Little Diamond gangway.

A pocket for Barley coal has been constructed in breaker, to replace the old one.

The installation of an electric dump car and the building of a breaker refuse hopper have been started and will be completed in one month. The electric car runs to a point south of the Diamond Slope where the refuse will be dumped upon the present rock bank.

An electric generator set has been installed in the new power house to furnish electricity for general colliery use.

A new boiler plant and power house have been built.

The boiler plant consists of six Sterling boilers, in batteries of two, and has a total rating of 1,800 B. H. P. The power house contains one 100 K. W. generator, one 150 H. P. motor and a switchboard, and one Ingersoll-Rand air compressor 18 by 20¼ inches.

DODSON COAL COMPANY

Morea Colliery.—A rock hole was driven from the West Buck Mountain bed, 3rd level, in breast No. 92, to the West Mammoth bed, 1st level, a distance of 58 yards.

A rock hole was driven from the East Buck Mountain gangway opposite breast No. 87, 3rd level, to the East Skidmore gangway, 2nd level, and thence to the East Mammoth gangway, 2nd level, a distance of 65 yards.

A rock hole was driven from the tunnel between the Seven Foot bed and the Buck Mountain bed just east of the shaft on the 2nd level, to the Skidmore bed, intermediate level, a distance of 39 yards; and from the top of this rock hole a slant gangway was driven to connect with the shaft at the elevation of the intermediate level.

A tunnel 50 yards long was driven from the Skidmore bed, North Dip, North basin, to the Skidmore bed, South dip, South basin, intermediate level.

A tunnel 20 yards long was driven from the Skidmore bed, South basin, to the Mammoth bed, intermediate level.

A tunnel 18 yards long was driven from the West Mammoth bed, Breast No. 6, to the Skidmore bed in the South dip, to connect with gangway being driven east from Breast No. 16.

A tunnel was driven from the Mammoth bed opposite Breast No. 6 to the Skidmore bed in the South dip, a distance of 18 yards.

On the top level two tunnels were driven; one from the Seven Foot bed between the main tunnel and the shaft, a distance of 30 yards, and the other to the Mammoth bed which is connected to the shaft, a distance of 35 yards. The West Seven Foot and West Skidmore gangways between the main tunnel and the shaft are nearly reopened and connected by the above tunnels, and therefore can be used as the main haulageway between the Shaft and the Big Bottom.

At No. 4 Slope installed a 13 by 10 inch Aldrich, vertical, triplex pump, electrically driven, which will elevate 1,000 gallons per minute against 135 feet.

Fifty-five new mine cars were added to the equipment.

The shaft has also been retimbered between the top and the 1st level, permitting the use of a double hoist.

Outside.—The course of the Mill Creek, which flowed through the center of the basin, was changed for a distance of 1,700 feet to a position north of the outcrop of the Buck Mountain bed on the north side of the basin. In order to do this, a tunnel 160 feet long, 14 feet wide and 7 feet high was driven underneath the Pennsylvania Railroad tracks.

The channel was 20 feet wide with an average cut of 10 feet.

There was also 420 feet of flume built.

The uncovering of the Mammoth Bed in stripping was completed this year.

Installed a car retarder for the handling of railroad cars as they are loaded under the breaker.

An extension 20 by 20 feet was built to the old power house to hold the rotary converter, transformers, et cetera, where a 4,400 volt A. C. current comes in and is transformed into 300 volt D. C., which supplies five electric motors and all the electric lights. A line was run to No. 4 Slope, which supplies current for the mine fan and for the inside slope hoist.

A new 8-inch steam line was run from the boiler house to the mouth of the Buck Mountain column way, a distance of 800 feet.

A new feature was added during 1914 in the appointment of a District Nurse to look after the sanitary condition in and around the village of Morea, which has been very successful in improving the appearance of the "Patch" in general.

MARYD COAL COMPANY

Maryd Colliery.—Outside: New settling tank. One double Lehigh Valley jig and jig house. Built concrete and tile wash house to take the place of the one burned down.

Inside: Built new concrete and steel mule stable, 2nd level. Drove 1,094 feet of tunnel, as follows:

First level, sump tunnel, 160 feet; 1st level, No. 1 basin, Bottom-Split to Top-Split, 158 feet; 2nd level, Holmes to Bottom-Split, 550 feet; 2nd level, Primrose to Holmes, 85 feet; 2nd level, Primrose to Orchard, 82 feet; 2nd level, Holmes vein through saddle, 59 feet.

LEHIGH VALLEY COAL COMPANY

Buck Mountain Colliery.—Outside: A water spray system for fire protection was installed in the Buck Mountain breaker.

Extensive repairs were made to the Buck Mountain and Vulcan houses.

An 8 5-32 by 8 inch Sturtevant engine was installed and connected to the 12½ kilowatt, 115 volt, direct current generator, for lighting the breaker, outside buildings, inside stable and inside pump room.

Vulcan Slope.—The construction of the tile stoppings in the fanway, mentioned in report of 1913, has been completed.

The timber was removed and concrete walls and reinforced concrete top placed in the mouth of the Buck Mountain vein manway from the surface to the beginning of the vein.

The erection of structural steel on the 5th level slope bottom, for the support of the roof, has been commenced.

COXE BROTHERS AND COMPANY, INCORPORATED

Oneida Colliery.—Outside: Erected brick locomotive house.

Inside: A 12 by 24 inch No. 1 hoisting engine was placed at No. 1 Tender slope to replace old one.

MILL CREEK COAL COMPANY

Middle Lehigh Colliery.—To handle run of mine coal to New Boston breaker from Wolf Creek Colliery, a track was graded and laid for mine locomotive and cars, a retaining wall was erected, and a hundred ton railroad scale installed.

Laid 6-inch wood pipe line to convey water to boilers.

A slope, No. 12, was commenced at eastern portion of bottom split of Mammoth workings from the surface.

Stripping of Top Split of Mammoth vein basin was completed and commenced removing coal.

Various ditches were dug and connections made with creek channel to prevent, as far as possible, any inflow of water.

Wolf Creek Colliery.—Inside: Buck Mountain Drift gangway reopened and driven in solid 2,925 feet. Airhole to surface, 297 feet.

Skidmore Vein: Pumped out 260 feet of water from slope. Gangways reopened and driven 908 feet. Airhole, 78 feet.

Scott Steel Vein: Gangway reopened and driven 350 feet. Airhole to surface, 311 feet.

Tunnel driven: South tunnel 28 feet, Second level, Skidmore to Buck Mountain, 33 feet, (still driving).

Pump house made in Skidmore vein and pumpway driven.

Outside: Built a tipple, stable, hoisting engine house, blacksmith shop, office and locomotive house. 4,325 feet of mine locomotive track constructed from tipple to drifts and slope. Installed one 10 by 14 Vulcan locomotive.

Stripping commenced on outcrop of Scott Steel vein.

EAST LEHIGH COAL COMPANY

East Lehigh Colliery.—Made a traveling-way and mule-way 600 feet long.

EASTERN PENNSYLVANIA COAL COMPANY

Silver Hill Colliery.—Tunnel is being driven from the New Vein gangway to a leader 50 feet, and an airhole from said leader to Rock Town tunnel.

NINETEENTH DISTRICT

SCHUYLKILL COUNTY

Pottsville, Pa., March 3, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my Annual Report as Inspector of Mines of the Nineteenth Anthracite District for the year ending December 31, 1914.

Respectfully submitted,

MICHAEL J. BRENNAN,
Inspector.

34—21—1915

SUMMARY OF STATISTICS

Number of collieries,	17
Number of mines,	52
Number of mines in operation,	50
Number of tons of coal shipped to market,	2,915,610
Number of tons used at mines for steam and heat,	502,540
Number of tons sold to local trade and used by employes,	41,074
Number of tons produced,	3,459,224
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	5,492
Number of persons employed outside,	2,575
Number of fatal accidents inside of mines,	24
Number of fatal accidents outside,	4
Number of non-fatal accidents inside of mines,	29
Number of non-fatal accidents outside,	5
Number of tons of coal produced per fatal accident inside,	144,134
Number of tons produced per fatal accident outside,	864,806
Number of tons produced per fatal accident inside and outside,	123,544
Number of persons employed per fatal accident inside,	229
Number of persons employed per fatal accident outside,	643
Number of persons employed per fatal accident inside and outside,	288
Number of persons employed per non-fatal accident inside,	189
Number of persons employed per non-fatal accident outside,	515
Number of persons employed per non-fatal accident inside and outside,	237
Number of wives made widows,	13
Number of children made orphans,	29
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	45
Number of compressed air locomotives used inside,	1
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	16
Number of electric motors used outside,	1
Number of gasoline locomotives used inside,	.....
Number of fans in use,	44
Number of furnaces in use,	.....
Number of gaseous mines in operation,	33
Number of non-gaseous mines in operation,	17
Number of new mines opened,	2
Number of old mines abandoned,	2

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,408,452
Lytle Coal Company,	391,682
Pine Hill Coal Company,	349,077
St. Clair Coal Company,	337,555
Oak Hill Coal Company,	293,442
Buck Run Coal Company,	259,587
Mt. Hope Coal Company,	120,171
White and Company,	90,722
Darkwater Coal Company,	72,472
Emperor Coal Company,	56,565
John H. Davis Company,	38,652
Wolf Creek Coal Company,	24,441
Butcher Creek Coal Company,	13,358
Black Heath Coal Company,	3,048
Total,	3,459,224

Production by Counties

Schuylkill,	3,459,224

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	9	.....	9	9	2	11	156,495	156,495	2,531	967	3,498	281	.....	281	483
Lytle Coal Co.,	.....	.....	.....	8	.....	8	.....	48,960	618	246	864	.....	.....	77	.....
Pine Hill Coal Co.,	7	.....	7	1	.....	1	49,868	349,077	513	194	707	73	.....	513	.....
St. Clair Coal Co.,	3	4	7	2	.....	2	112,518	168,777	460	388	788	133	97	200	.....
Oak Hill Coal Co.,	1	.....	1	2	2	4	293,442	146,721	504	234	738	504	.....	252	117
Buck Run Coal Co.,	2	.....	2	6	.....	6	129,793	43,265	515	149	664	257	.....	86	.....
White and Co.,	1	.....	1	1	.....	1	90,722	90,722	136	78	214	136	.....	136	.....
Darkwater Coal Co.,	1	.....	1	.....	.....	.....	72,472	.....	154	86	240	154	.....	.....	.....
Emperor Coal Co.,	.....	.....	.....	.....	1	1	.....	.....	.....	32	32	.....	.....	.....	32
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	121	201	322	.....	.....	.....	.....
Totals and averages,	24	4	28	29	5	34	144,134	119,284	5,492	2,575	8,067	229	643	189	515

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	1	....	...	1	...	2	....	....	....	....	4	16.67
Falls of slate,	....	....	....	....	1	1	1	....	....	1	....	1	5	20.83
Mine cars,	....	....	....	....	....	1	....	....	3	....	....	....	4	16.67
Explosions of gas,	....	....	1	....	....	....	....	....	....	....	....	....	1	4.17
Suffocation by gas, etc.,	....	....	....	....	....	....	....	....	....	....	....	1	1	4.17
Blasts, premature and otherwise,	....	....	....	....	....	....	....	....	....	....	1	1	2	8.33
Falling into shafts,	....	....	....	4	....	....	....	....	....	....	....	....	4	16.67
Machinery,	....	1	....	....	....	....	....	....	....	....	....	....	1	4.17
Electricity,	....	....	....	....	1	....	....	....	....	....	....	....	1	4.16
Rush of coal,	....	....	....	....	1	....	....	....	....	....	....	....	1	4.16
Totals,	....	1	2	4	3	3	1	2	3	1	1	3	24	100.00
Outside														
Cars,	....	....	....	....	1	....	....	....	....	....	....	1	2	50.00
Explosions of blast,	....	2	....	....	....	....	....	....	....	....	....	....	2	50.00
Totals,	....	2	....	....	1	....	....	....	....	....	....	1	4	100.00
Grand totals inside and outside,	....	3	2	4	4	3	1	2	3	1	1	4	28	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	1	....	....	....	1	1	....	....	....	....	3	10.35
Falls of slate,	1	....	....	....	....	....	2	....	....	....	....	....	3	10.34
Mine cars,	....	....	....	2	1	....	....	....	2	....	....	....	5	17.24
Explosions of gas,	....	2	1	1	....	....	1	....	....	....	3	1	9	31.03
Explosions of powder and dynamite,	....	1	....	..	...	....	....	....	....	....	....	....	1	3.45
Blasts, premature and otherwise,	....	....	1	1	1	....	....	....	1	....	....	....	4	13.79
Struck by timber,	....	....	....	....	....	....	1	....	....	....	....	....	1	3.45
Struck by spike,	....	....	....	....	....	....	....	1	....	....	....	....	1	3.45
Struck by coal,	....	....	....	....	....	....	....	....	1	1	....	....	2	6.90
Totals,	1	3	3	4	2	....	5	2	4	1	3	1	29	100.00
Outside														
Cars,	....	....	....	....	1	1	....	....	....	....	....	....	2	40.00
Machinery,	....	....	....	1	....	1	....	....	....	....	....	....	2	40.00
Struck by timber,	....	....	....	....	....	....	....	1	....	....	....	....	1	20.00
Totals,	....	....	....	1	1	2	....	1	....	....	....	....	5	100.00
Grand totals inside and outside,	1	3	3	5	3	2	5	3	4	1	3	1	34	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	....	2	4	1	2	1	2	1	1	1	2	17
Miners' laborers,	....	....	....	....	2	....	....	....	....	....	....	1	3
Drivers and runners,	....	....	....	....	....	1	....	....	2	....	....	....	3
Pumpmen,	....	1	....	....	....	....	....	....	....	....	....	....	1
Totals,	....	1	2	4	3	3	1	2	3	1	1	3	24
Outside													
Chargemen,	....	1	....	....	....	....	....	....	....	....	....	....	1
Drillers,	....	1	....	....	....	....	....	....	....	....	....	....	1
Patchers,	....	....	....	....	1	....	....	....	....	....	....	....	1
Laborers,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	....	2	....	....	1	....	....	....	....	....	....	1	4
Grand totals inside and outside,	...	3	2	4	4	3	1	2	3	1	1	4	28

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	2	3	1	....	....	4	1	2	1	2	1	17
Miners' laborers,	1	1	....	....	1	....	1	1	2	....	1	....	8
Drivers and runners,	....	....	....	1	....	....	....	....	....	....	....	....	1
Machine runners,	....	....	....	1	....	....	....	....	....	....	....	....	1
Company men,	....	....	....	....	1	....	....	....	....	....	....	....	1
Bottommen,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	1	3	3	4	2	....	5	2	4	1	3	1	29
Outside													
Blacksmiths and carpenters,	....	....	....	....	....	....	....	1	....	....	....	....	1
Slatepickers (boys),	....	....	....	....	....	1	....	....	....	....	....	....	1
Oilers,	....	....	....	1	....	....	....	....	....	....	....	....	1
Laborers,	....	....	....	....	1	....	....	....	....	....	....	....	1
Spraggers,	....	....	....	....	....	1	....	....	....	....	....	....	1
Totals,	....	....	....	1	1	2	....	1	....	....	....	....	5
Grand totals inside and outside,	1	3	3	5	3	2	5	3	4	1	3	1	34

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American	....	2	....	1	1	....	....	....	....	....	....	....	4
Polish,	....	....	....	....	....	1	....	....	....	....	....	....	1
Italian,	....	1	....	1	....	....	....	1	....	....	....	1	4
Slavonian,	....	....	1	....	3	....	....	1	1	1	....	1	8
Lithuanian,	....	....	1	....	....	2	1	....	1	....	....	2	7
Austrian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Russian,	....	....	....	1	....	....	....	....	....	....	1	....	2
Greek,	....	....	....	....	....	....	....	....	1	....	....	....	1
Totals,	....	3	2	4	4	3	1	2	2	1	1	4	28

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	....	1	....	2	....	1	....	....	....	1	5
German,	....	....	1	....	1	....	1	....	....	....	....	....	3
Polish,	....	1	1	2	1	....	1	....	....	....	1	....	7
Hungarian,	....	....	....	....	....	....	....	1	....	....	....	....	1
Slavonian,	....	1	....	1	....	....	2	....	2	....	....	....	6
Lithuanian,	1	....	1	1	....	....	....	....	2	1	....	....	6
Austrian,	....	....	....	....	....	....	....	1	....	....	2	....	3
Russian,	....	1	....	....	1	....	1	....	....	....	....	....	3
Totals,	1	3	3	5	3	2	5	3	4	1	3	1	34

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside	
Philadelphia and Reading Coal and Iron Co.																
Otto Colliery:																
Otto White Ash, ...	Drift, ...	Gaseous, ..	Fan, ...	15	5.	3.5	96	1.5	Guibal, ...	Steam, ...	10	.....	.....	.....		
Otto Mud, ...	Drift, ...	Non-gas., .	Fan, ...	12	4.2	3.6	84	1.7	Guibal, ...	Steam, ...	2	115,000	80,000	126,000	560	
Otto, ...	Shaft, ...	Gaseous, ..	Fan, ...	18	6.	5.6	49	.6	Guibal, ...	Steam, ... }	12	111,931	33,427	126,295		
Otto Red Ash, ...	Slope, ...	Gaseous, ..	Fan, ...	21	7.	6.	84	2.5	Guibal, ...	Steam, ... }						
Pine Knot Colliery:																
Pine Knot, No. 1, ...	Shaft, ...	Gaseous, }	Fan, ...	21	7.	6.	70	1.4	Guibal, ...	Steam, ...	9	36,360	25,300	43,160		
Pine Knot No. 2, ...	Shaft, ...	Gaseous, }														
Thomaston, Lelar, ... }	Slope, ...	Gaseous, ..	Fan, ...	18	6.	5.2	88	1.2	Guibal, ...	Steam, ...	8	66,208	58,961	73,777	501	
Thomaston Crosby, ... }								....								
Thomaston, ...	Drift, ...	Non-gas., .	Fan, ...	12	4.2	3.5	75	.4	Guibal, ...	Steam, ...	2	23,675	21,801	25,493		
Wadesville Colliery:																
Wadesville, ...	Shaft, ...	Gaseous, ..	Fan, ...	21	7.	6.2	76	1.6	Guibal, ...	Steam, ... }	18	123,515	123,515	132,645		
Wadesville, ...	Shaft, ...	Gaseous, ..	Fan, ...	21	7.	6.2	73	1.4	Guibal, ...	Steam, ... }						
Wadesville, Primrose, ..	Slope, ...	Non-gas., .	Fan, ...	15	5.	4.6	56	1.	Guibal, ...	Steam, ...	4	18,000	22,500	24,000	594	
Wadesville, Holmes, ...	Slope, ...	Non-gas., .	Fan, ...	8	5.	2.	116	.3	Guibal, ...	Steam, ...	2	15,800	11,000	16,250		
Wadesville, Vulcan, ...	Slope, ...	Gaseous, ..	Fan, ...	8	2.8	2.5	90	.3	Guibal, ...	Steam, ...	3	.....	.....	.....		
Wadesville, Beechwood,	Drift, ...	Non-gas., .	Fan, ...	18	6.	5.	21	.4	Guibal, ...	Steam, ...	6	23,000	22,300	23,320		
Phoenix Park Colliery:																
Phoenix Park, Diamond,	Slope, ...	Gaseous, ..	Fan, ...	15	5.	3.5	.....	.....	Guibal, ...	Steam, ...	23	132,580	98,330	150,400		
Phoenix Park, Peach Mountain, ...	Slope, ...	Gaseous, ..	Fan, ...	21	7.	6.	.....	.....	Guibal, ...	Steam, ...	7	62,475	56,125	65,150	513	
Phoenix Park, No. 6,..	Slope, ...	Gaseous, ..	Fan, ...	15	5.	3.5	115	.7	Guibal, ...	Steam, ...	..	.....	.....	.....		

Glendower Colliery:															
Glendower,	Slope,	Gaseous,	Fan,	21	6.10	6.	90	2.	Guibal,	Steam,	9	90,380	47,440	92,000	304
Glendower, West,	Slope,	Gaseous,	Fan,	18	6.	5.	76	1.6	Guibal,	Steam,	19	75,660	46,140	76,220	
Glendower No. 2,	Drift,	Non-gas.,	Fan,	8	2.11	2.3	130	.2	Guibal,	Steam,	5	15,600	13,200	15,900	
Glendower No. 1,	Drift,	Non-gas.,	Fan,	15	4.6	5.	48	.4	Guibal,	Electricity,	6	42,900	15,700	43,600	
John Veith Colliery:															
John Veith No. 1,	Shaft,	Gaseous,	Fan,	15	5.	4.6	80	.4	Guibal,	Steam,	8	36,000	35,205	37,900	59
John Veith No. 2,	Shaft,	Gaseous,	Fan,	15	5.	4.6	80	.4	Guibal,	Steam,	10	44,100	36,815	45,600	
Lytle Coal Co.															
Lytle Colliery:															
Lytle,	Shaft,	Gaseous,	Fan,	18	7.	5.10	90	2.2	Guibal,	Steam,	24	270,190	180,120	307,190	618
			Fan,	18	7.	5.10	94	2.1							
Lytle,	Slope,	Gaseous,	Fan,	18	7.	5.5	100	2.1							
			Fan,	20	7.	5.	95	2.							
Pine Hill Coal Co.															
Pine Hill Colliery:															
Pine Hill,	Shaft,	Gaseous,	Fan,	18	4.	4.	90	1.2	Guibal,	Steam,	23	138,945	110,915	152,600	513
				20	6.	6.	76	1.5		Steam,					
Pine Hill,	Slope,	Gaseous,	Fan,	12	4.6	4.	110	1.4	Guibal,	Electricity					
Pine Hill,	Drift,	Gaseous,	Fan,	18	4.	4.	100	1.2	Guibal,	Electricity					
St. Clair Coal Co.															
St. Clair Colliery:															
St. Clair,	Slope,	Gaseous,	Fan,	16	5.	5.	65	.4	Guibal,	Steam,	..	54,330	23,400	56,320	400
				14	5.	3.6	90	1.2	Guibal,	Steam,	..	52,940	25,360	51,200	
St. Clair,	Shaft,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	.....
St. Clair,	Tunnel,*	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	.....
Oak Hill Coal Co.															
Oak Hill Colliery:															
Oak Hill,	Shaft,	Gaseous,	Fan,	24	8.3	6.4	70	1.25							
Oak Hill,	Slope,	Gaseous,	Fan,	18	6.	4.	90	1.5	Vulcan,	Steam,					
Oak Hill,	Slope,	Gaseous,	Fan,	12	4.	4.	90	1.5	Guibal,	Steam,	28	316,630	257,176	326,860	504
Oak Hill No. 1,	Drift,	Non-gas.,	.....	.....	.....	.....	.....	.....							
Oak Hill No. 2,	Drift,	Non-gas.,	Fan,	8	3.	3.2	210	1.8	Stine,	Steam,					
Buck Run Coal Co.															
Buck Run Colliery,:															
Buck Run,	Slope,	Gaseous,	Fan,	12	4.	4.	95	1.6	Guibal,	Steam,					
Buck Run,	Slope,	Gaseous,	Fan,	16	6.	5.	95	1.7	Guibal,	Steam,	15	153,000	157,000	165,000	515
				16	4.	5.	95	1.9	Guibal,	Electricity					
				6	.....	.....	.....	.....	Sirocco,	Electricity					
Mt. Hope Coal Co.															
Mt. Hope Colliery:															
Mt. Hope No. 8,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	68
Mt. Hope No. 9,															
Mt. Hope No. 10,															
Mt. Hope No. 3,*															

*Abandoned.

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
White and Co.															
Howard Colliery:															
Howard No. 1, ...	Slope,.....	Gaseous, ..	Fan, ...	12	4.2	3.4	65	.4	Guibal, ...	Steam,.....	6	51,000	37,000	53,000	136
Howard No. 2, ...	Slope,.....	Gaseous, ..	Fan, ...	10	3.	3.8	66	.6							
Howard No. 3,*	Slope,.....	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....							
Darkwater Coal Co.															
Newcastle Colliery:															
Newcastle, ...	Slope,.....	Gaseous, ..	Fan, ...	20	6.	6.	73	1.5	Vulcan, ...	Steam,.....	6	51,200	47,700	53,000	154
Newcastle, ...	Slope,.....	Gaseous, ..	Fan, ...	10	3.	3.	84	1.5							
John H. Davis Co.															
Ellsworth Colliery:															
Ellsworth, ...	Slope,.....	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	18
Butcher Creek Coal Co.															
Laurel Run Colliery:															
Laurel Run, ...	Slope,.....	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	28
Laurel Run, ...	Drift, ...	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....							
Black Heath Coal Co.															
Black Heath Colliery:															
Black Heath, ...	Slope,.....	Non-gas., .	Natural, ..	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	7

*New Mine.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Otto,	Schuylkill, ...	E. E. Kaercher, ..	Pottsville, ...	Reese Tasker, ...	Pottsville, ...	Philadelphia and Reading
Pine Knot,		E. E. Kaercher, ..				
Wadesville,		G. B. Hadesty, ..				
Phoenix Park,		E. E. Kaercher, ..				
Glendower,		E. E. Kaercher, ..				
John Veith,		E. E. Kaercher, ..				
Anchor Washery,		E. E. Kaercher, ..				
Lytle Coal Co.						
Lytle,	Schuylkill, ...	R. A. Quin, ...	Wilkes-Barre, ...	D. V. Randall, ...	Minersville, ...	Pennsylvania
Pine Hill Coal Co.						
Pine Hill,	Schuylkill, ...	George M. Keiser, ..	Minersville, ...	George M. Keiser, ..	Minersville, ...	Pennsylvania
St. Clair Coal Co.						
St. Clair,	Schuylkill, ...	.....	.....	W. T. Smythe, ...	Pottsville, ...	Philadelphia and Reading
Oak Hill Coal Co.						
Oak Hill,	Schuylkill, ...	Thomas M. Righter, .	Duncott, ...	George M. Jeffrey, ..	Duncott, ...	Philadelphia and Reading
Buck Run Coal Co.						
Buck Run,	Schuylkill, ...	James B. Neale, ...	Minersville, ...	George W. Hay, ...	Minersville, ...	Philadelphia and Reading
Mt. Hope Coal Co.						
Mt. Hope,	Schuylkill, ...	I. D. Beahme, ...	Port Carbon, ...	.....	.....	Philadelphia and Reading
White and Co.						
Howard,	Schuylkill, ...	Robert White, ...	Pottsville, ...	.....	.....	Philadelphia and Reading
Darkwater Coal Co.						
Newcastle,	Schuylkill, ...	James B. Neale, ...	Minersville, ...	John Conway, ...	Pottsville, ...	Pennsylvania
Emperor Coal Co.						
Emperor Washery,	Schuylkill, ...	George M. Keiser, ..	Minersville, ...	George M. Keuch, ..	Minersville, ...	Philadelphia and Reading
John H. Davis Co.						
Ellsworth,	Schuylkill, ...	J. Arthur Davis, ...	St. Clair, ...	.....	.....	Philadelphia and Reading

TABLE 1.—Continued

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Wolf Creek Coal Co. Wolf Creek Washery, ...	Schuylkill, ...	George M. Keiser, ..	Minersville, ...	Allen F. Keller, ...	Minersville, ...	Philadelphia and Reading
Butcher Creek Coal Co. Laurel Run, ...	Schuylkill, ...	L. J. Whims, ...	St. Clair, ...	.....	.....	Philadelphia and Reading
Black Heath Coal Co. Black Heath, ...	Schuylkill, ...	George Scott, ...	Minersville, ...	Alexander Scott, ...	Frackville, ...	Pennnsylvania

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.													
Otto,	Schuylkill,	291,262	67,407	1,806	360,475	230	787	1	2	4,200	66,368	50,699	87
Pine Knot,		255,648	59,186	1,427	316,261	231	805	4	2	.....	193,682	29,308	71
Wadesville,		269,189	38,392	1,526	309,107	230	779	1	3	18,625	44,790	84,008	61
Phoenix Park,		197,263	31,028	2,619	230,910	227	672	1	4	.....	45,620	89,843	66
Glendower, *		153,229	17,638	.....	170,867	231	369	2	.....	8,600	118,573	12,273	50
John Veith,†		20,628	.....	.....	20,628	.....	83	.....	.....	.....	2,285	9,287	10
Anchor Washery,		.....	204	.....	204	.....	3	.....	.....	.....	.....	.....	.....
Totals,	.....	1,187,219	213,855	7,378	1,408,452	.....	3,498	9	11	31,425	471,318	275,398	345
Lytle Coal Co.													
Lytle,	Schuylkill, ...	303,176	76,200	12,306	391,682	263	864	.....	8	.....	33,860	112,483	68
Pine Hill Coal Co.													
Pine Hill,	Schuylkill, ...	308,733	38,800	1,544	349,077	293	707	7	1	50,000	88,075	74,500	32
St. Clair Coal Co.													
St. Clair,	Schuylkill, ...	255,168	73,105	9,282	337,555	265	788	7	2	339,510	232,201	.....	42
Oak Hill Coal Co.													
Oak Hill,	Schuylkill, ...	261,921	30,000	1,521	293,442	263	733	1	4	8,125	40,400	111,525	54

*Coal prepared at Pine Knot.
†Coal prepared at Otto.

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of permissible explosives used	
Buck Run Coal Co.													
Buck Run,	Schuylkill,	229,959	28,800	828	259,587	261	664	2	6	3,425	138,901	.....	25
Mt. Hope Coal Co.													
Mt. Hope,	Schuylkill,	108,991	7,200	3,980	120,171	271	153	.....	.....	375	4,950	.....	10
White and Company													
Howard,	Schuylkill,	82,743	7,500	479	90,722	290	214	1	1	.....	20,000	6,000	14
Darkwater Coal Co.													
Newcastle,	Schuylkill,	58,184	13,680	608	72,472	160	240	1	.....	875	22,062	.....	14
Emperor Coal Co.													
Emperor Washery,	Schuylkill,	52,965	3,600	.....	56,565	235	32	.....	1	.....	.....	.....	.....
John H. Davis Co.													
Ellsworth,	Schuylkill,	34,128	3,800	724	38,652	300	90	.....	.....	3,750	7,500	.....	3
Wolf Creek Coal Co.													
Wolf Creek Washery,	Schuylkill,	22,241	2,200	.....	24,441	195	23	.....	.....	.....	.....	.....	.....
Butcher Creek Coal Co.													
Laurel Run,	Schuylkill,	9,758	3,500	100	13,358	225	43	.....	.....	.....	2,500	.....	4
Black Heath Coal Co.													
Black Heath,	Schuylkill,	424	300	2,324	3,048	305	13	.....	.....	.....	1,200	.....	2
Grand totals,	.....	2,915,610	502,540	41,074	3,459,224	.....	8,067	28	34	437,485	1,062,967	579,906	613

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	.....	.....	79	12,490	12,490	.....	17	1	3	206	27,792	21	29,887	8,794	3	6
Lytle Coal Co.,		.....	.....	21	7,287	7,287	.....	1	.....	3	21	7,287	1	2,500	1,380	3	3
Pine Hill Coal Co.,		.....	.....	4	3,000	3,000	.....	.....	.....	6	30	2,040	4	6,000	800	2	.....
St. Clair Coal Co.,		.....	.....	22	3,100	3,100	.....	13	.....	.....	22	1,500	5	1,500	.....	4	.....
Oak Hill Coal Co.,		.....	.....	5	2,500	2,500	1	6	.....	.....	21	2,000	2	2,000	1,100	.....	.....
Buck Run Coal Co.,		.....	.....	9	1,800	1,800	.....	1	.....	5	26	1,020	3	1,800	900	2	3
Mt. Hope Coal Co.,		.....	.....	8	850	850	.....	4	.....	.....	11	725	.....	.....	.....	.....	.....
White and Co.,		.....	.....	2	575	575	.....	.....	.....	.....	16	677	4	2,500	900	.....	27
Darkwater Coal Co.,		.....	.....	6	1,200	1,200	.....	1	.....	.....	16	805	3	400	1,400	.....	1
Emperor Coal Co.,		.....	.....	2	300	300	.....	.....	.....	.....	2	180	.....	.....	.....	.....	.....
John H. Davis Co.,		.....	.....	6	600	600	.....	3	.....	.....	7	250	2	1,350	500	.....	1
Wolf Creek Coal Co.,		.....	.....	2	200	200	.....	.....	.....	.....	5	120	.....	.....	.....	.....	.....
Butcher Creek Coal Co.,		.....	.....	3	280	280	.....	.....	.....	.....	10	400	3	.....	.....	.....	.....
Black Heath Coal Co.,		.....	.....	1	80	80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	.....	.....	.....	163	34,262	34,262	1	46	1	17	393	44,796	48	47,937	15,774	14	41

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.	Schuylkill,	9	69	....	788	386	163	8	20	304	784	2,531	....	13	53	169	97	32	17	586	967	3,498
Lytle Coal Co.,		1	3	14	246	103	43	3	11	33	161	618	1	1	18	43	68	15	8	92	246	864
Pine Hill Coal Co.,		1	2	8	205	140	38	10	3	....	106	513	1	1	22	18	37	14	5	96	194	707
St. Clair Coal Co.,		2	....	6	200	67	16	13	4	....	92	400	1	3	21	45	40	20	4	254	388	788
Oak Hill Coal Co.,		1	....	11	305	75	31	11	4	41	25	504	1	1	19	27	58	13	5	110	234	738
Buck Run Coal Co.,		1	1	5	172	138	21	11	4	4	158	515	1	1	13	18	13	1	4	98	149	664
Mt. Hope Coal Co.,		1	1	....	27	28	4	....	....	7	.....	68	1	2	6	17	10	....	2	47	85	153
White and Co.,		1	2	....	73	26	7	....	2	25	.....	136	1	2	3	13	21	1	2	35	78	214
Darkwater Coal Co.,		1	....	1	51	32	12	....	4	51	2	154	1	1	5	10	12	1	1	55	86	240
Emperor Coal Co.,		....	....	....	.....	.....	....	....	....	....	.....	.....	1	....	2	2	4	....	....	23	32	32
John H. Davis Co.,		1	....	1	7	2	1	....	2	4	.....	18	1	1	2	3	4	3	1	55	72	90
Wolf Creek Coal Co.,		....	....	....	.....	.....	....	....	....	....	.....	.....	1	....	...	3	2	....	1	17	23	23
Butcher Creek Coal Co.,		1	1	....	10	16	....	....	....	....	.....	28	1	1	1	5	1	....	1	5	15	43
Black Heath Coal Co.,		1	....	....	4	2	....	....	....	....	.....	7	....	....	....	....	2	....	....	4	6	13
Totals,		21	79	46	2,088	1,015	336	56	54	469	1,328	5,492	12	27	165	374	369	100	51	1,477	2,575	8,067

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	20	16	18	24	24	19	15	16	21	20	20	18	231
Lytle Coal Co.,		20	18	22	24	24	20	23	22	24	24	23	19	263
Pine Hill Coal Co.,		24	22	25	23	24	26	26	25	25	27	24	23	293
St. Clair Coal Co.,		21	12	20	23	24	25	25	22	24	24	22	23	265
Oak Hill Coal Co.,		25	20	25	23	24	17	21	21	18	24	23	23	263
Buck Run Coal Co.,		24	24	24	22	24	23	26	12	11	23	24	24	261
Mt. Hope Coal Co.,		24	20	24	24	22	15	24	25	25	22	23	23	271
White and Co.,		24	22	25	24	24	24	23	25	24	26	24	25	290
Darkwater Coal Co.,		22	22	22	21	10	.....	.....	.....	.....	17	23	23	160
Emperor Coal Co.,		.....	17	24	25	19	21	25	24	21	25	22	12	235
John H. Davis Co.,		25	24	25	24	25	26	26	25	25	26	24	25	300
Wolf Creek Coal Co.,		25	24	24	24	11	.....	12	25	25	21	4	.....	195
Butcher Creek Coal Co.,		21	13	21	23	25	19	8	.....	24	25	23	23	215
Black Heath Coal Co.,		26	24	26	26	26	25	25	26	25	26	26	24	305

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Feb. 2	Frank Denning, ...	American, ..	Driller, ...	44	M.	1	3	St. Clair, ...		Killed while in the act of drilling out machine hole that missed fire on the stripping, the blast exploded. Outside.
	John Deluca, ...	Italian, ...	Chargeman, ..	42	S.	....	....			
4	David Griger, ...	American, ..	Pumpman, ...	18	S.	....	....	Newcastle, ...		Fatally injured. He climbed over the pump plunger while it was in motion to tighten the bolts on the gland of the pump, and slipped and fell on the plunger, and was squeezed against prop that supported the column pipe. Died March 6.
March 14	George Meadock, ...	Slavonian, ..	Miner, ...	45	M.	1	....	St. Clair, ...		Killed by fall of top coal while shoveling coal alongside of pillar.
21	Frank Vellar, ...	Lithuanian,	Miner, ...	29	S.	....	....	Oak Hill, ...		Fatally burned by explosion of gas in breast. He drilled two holes and fired them, exploding the gas. Died a week later.
April 22	Thomas Semiskey, .	Austrian, ...	Miner, ...	33	M.	1	3	Pine Hill, ...	Schuylkill, .	Killed by being thrown from cage to bottom of shaft. While being hoisted up the shaft the cage dumped, throwing the four men to the bottom.
	Casmer Delago, ...	American, ..	Miner, ...	24	M.	....	1			
	Peter Airin, ...	Italian, ...	Miner, ...	25	M.	1	1			
	Joseph Kruzick, ...	Russian, ...	Miner, ...	35	M.	1	6			
May 1	William Baslus, ...	Slavonian, ..	Patcher, ...	18	S.	....	....	St. Clair, ...		Fatally injured by being caught between bumpers of cars. Outside.
4	George Maley, ...	American, ..	Miner, ...	44	M.	....	....	Glendower, ...		Fatally injured by being struck on head by rush of coal. He was sinking prop hole on high side of gangway near face, when loose coal rushed down old chute. Died May 14.
13	Michael Stuka, ...	Slavonian, ..	Laborer, ...	27	S.	...	....	Buck Run, ...		Electrocuted while assisting to timber gangway.
29	Michael Brinsowitz, ..	Slavonian, ..	Laborer, ...	28	M.	1	1	St. Clair, ...		Killed by fall of slate at face of breast.
June 10	Michael Stetlask, ...	Polish, ...	Miner, ...	52	M.	1	5	St. Clair, ...		Killed by fall of top slate when he returned to face of breast after firing blast.
12	Joseph Projus, ...	Lithuanian,	Miner, ...	28	S.	....	....	Pine Hill, ...		Killed by fall of top coal while drilling hole at face of breast.

June	25	William Petcheskie,,..	Lithuanian,	Driver, ...	19	S.	....	....	Phoenix Park, ..		Fatally injured by being caught between mine cars. He stepped from empty track to loaded track to avoid trip that was being lowered into first level. East on Tracey No. 6 slope. Died June 27.
July	11	Charles Louches, ...	Lithuanian,	Miner, ...	30	S.	....	....	Pine Knot, ...		Killed by fall of slate at face of breast.
Aug.	5	Paul Yelsheck, ...	Slavonian, ..	Miner, ...	31	M.	1	3	Otto, ...		Fatally injured. He was on his way down the breast to start some coal that was blocked in the chute at a point 15 feet from face of breast when a piece of top coal fell on him from between the props. Died the same day.
		Dominick Landi, ...	Italian, ...	Miner, ...	32	M.	1	3	Pine Hill, ...		Fatally injured by fall of top coal while preparing prop hole at face of breast. Died November 16.
Sept.	9	Anthony Pecheskie, ..	Slavonian, ..	Driver, ...	19	S.	....	....	Pine Knot, ...		Fatally injured by being caught between cars while assisting to place car on track 60 feet from bottom of Lelar Slope. Died September 10.
	26	Joseph Wazitas, ...	Lithuanian,	Miner, ...	41	S.	....	....	Pine Knot, ...		Killed while coming up Crosby Slope in car from No. 3 level. The car stopped at No. 2 level and Wazitas raised his head and was caught against temporary bottom used at No. 2 level.
	30	Nicholas Stuller, ...	Greek, ...	Driver, ...	25	S.	....	...	Wadesville, ...	Schuylkill, .	Killed by being caught under trip of cars in gangway.
Oct.	8	Joseph Grosnosky, ...	Slavonian, ..	Miner, ...	42	M.	1	3	Pine Hill, ...		Fatally injured by fall of top slate near face while removing breast pillar. Died the same day.
Nov.	19	Joseph Suruskus, ...	Russian, ...	Miner, ...	35	M.	1	....	Pine Knot, ...		Killed by blast at face of gangway, while preparing holes for timber.
Dec.	10	Simon Corango, ...	Lithuanian,	Miner, ...	32	S.	....	....	Glendower, ...		Killed by blast at face of breast. He was drilling the tamping out of hole that had missed fire when the charge exploded.
	12	Zopito Antonio Donatello.	Italian, ...	Laborer, ...	44	M.	1	....	St. Clair, ...		Killed while attempting to cross between loaded cars on stripping while they were in motion. Outside.
	19	John Broucheck, ...	Slavonian, ..	Laborer, ...	34	M.	1	....	Howard.		Fatally injured by fall of dividing slate while standing 5 feet from face of gangway under the timber. Died the same day.
	21	Walter Dumbroskie, .	Lithuanian,	Miner, ...	23	S.	....	....	Buck Run, ...		Suffocated in chute. He and his partner were placing new props in front of Skidmore breast battery to secure it. They had the chute filled with coal, some of it coming from Daniel seam new breast through a rock hole. They notified the loader to load some coal, and when he commenced to load, Dumbroskie and his partner were drawn down the chute.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 27	Joseph Frommas, ...	Lithuanian,	Laborer, ...	25	M.	Wadesville, ...		Leg fractured by fall of top slate while shoveling coal at face of gangway.
Feb. 18	Charles Laconish, ...	Polish,.....	Miner, ...	29	M.	Oak Hill, ...		Hand injured. He was knocking dynamite cap to remove the saw dust when it exploded in his hand.
28	Alexander Pomiskey,	Slavonian,	Miner, ...	50	M.	Phoenix Park,		Face and hands burned. After firing blast in monkey heading they returned to the face, and when the laborer raised his safety lamp he ignited the gas.
	Alexander Sinco, ..	Russian, ...	Laborer, ...	39	M.			
March 21	Claude Dubbs, ...	German, ...	Miner, ...	32	M.	Oak Hill, ...		Face and hands burned by explosion of gas in breast.
23	Frank Sucawinsky, ..	Polish,.....	Miner, ...	31	M.	Lytle, ...		Pelvis fractured by fall of coal at face of breast.
28	John Balsus, ...	Lithuanian,	Miner, ...	27	M.	Pine Knot, ...	Schuylkill, .	Face and eyes injured by explosion of a stick of dynamite in drill hole at gangway face.
April 14	Anthony Smollick, ...	Polish,.....	Bottomman, ...	27	M.	Wadesville, ...		Hand crushed by being caught between wheel of car and Scotch block.
21	William Walcavage,	Lithuanian,	Driver, ...	22	S.	Pine Hill, ...		Groin bruised by being bumped by car.
22	Charles Fedock, ...	Polish,.....	Oiler, ...	25	M.	Emperor Washery.		Leg fractured while shoveling coal on platform the cog-wheel came loose and fell and struck the platform, breaking it and throwing him to the ground. Outside.
27	Michael Wilotshick,..	Slavonian, ..	Miner, ...	39	M.	St. Clair, ...		Thigh bone fractured by explosion of blast at face of breast.
	Morgan Skidmore, ...	American, ..	Machine runner, ...	35	S.	Buck Run, ...		Face and hands burned by explosion of gas while carrying drilling machine over pile of rock at face of tunnel.
May 4	Peter Petrosky, ...	Polish,.....	Laborer, ...	27	S.	Buck Run, ...		Hands and face injured by explosion of blast at face of breast.
8	Andrew Darchnck, ..	Russian, ...	Laborer, ...	30	M.	Oak Hill, ...		Leg fractured by being caught between car and locomotive while riding on locomotive bumper. Outside.
13	Leo Harvey, ...	German, ...	Company man, ...	34	M.	Wadesville, ...		Ribs fractured by being caught between top of car and timber.

June	10	Patrick Brennan, ...	American, ..	Spragger, ...	19	S.	Pine Knot, ...			Knee crushed by being caught between bumpers of cars. Outside.
	15	Alfonzo Gottschall,...	American, ..	Slatepicker, ...	15	S.	Otto, ...			Leg fractured. He fell into scraper line when starting rock that had blocked in the chute. Outside.
July	1	Herman Hicks, ...	German, ...	Laborer, ...	23	S.	Phoenix Park, ..			Leg fractured by fall of top coal while shoveling coal at face of chute.
	11	Michael Sinko, ...	Slavonian, ..	Miner, ...	29	M.	Howard, ...			Leg fractured by timber falling on it while loading buggy at face of breast a piece of coal fell and struck timber, discharging one leg from under the collar.
	20	John Herna, ...	Slavonian, ..	Miner, ...	38	M.	Otto, ...			Leg fractured by fall of top slate near face while sinking slope.
		Alexander Peron, ...	Russian, ...	Miner, ...	26	M.	Lytle, ...			Face and hands burned by gas. He was lighting fuse to fire blast at face of breast when he ignited the gas.
	29	Adam Kolinsky, ...	Polish, ...	Miner, ...	34	M.	Buck Run, ...			Leg fractured by fall of slate in breast.
Aug.	4	Charles Parraisch, ..	Austrian, ...	Miner, ...	47	M.	Lytle, ...			Arm crushed by fall of coal while drilling hole at face of breast.
	13	Robert Lengel, ...	American, ..	Carpenter, ...	42	M.	Oak Hill, ...			Thigh fractured. He was pulling down slate pockets in breaker, when the partition between the pockets fell on him. Outside.
	31	John Morxie, ...	Hungarian, .	Laborer, ...	38	M.	Buck Run, ...			Eye destroyed. He placed hook spike on rail and struck it with hammer to straighten it. The spike rebounded from the blow and struck him.
Sept.	5	Michael Bell, ...	Slavonian, ..	Miner, ...	35	M.	St. Clair, ...	Schuylkill, .		Body injured by being struck by coal from blast at face of breast.
	17	Adam Burk, ...	Lithuanian,	Miner, ...	53	M.	Buck Run, ...			Leg fractured. He was coming out of gunboat pit when the boat started and one of the wheels caught his leg.
	23	Anthony Keller, ...	Slavonian, ..	Laborer, ...	55	M.	Buck Run, ...			Leg fractured by being struck by a piece of coal that came down the slope while he was loading mine car off bottom of slope.
	28	George Stronolas, ...	Lithuanian,	Laborer, ...	23	S.	Phoenix Park, ..			Hips injured by being squeezed between car and mine door frame.
Oct.	7	Paul Sulcavage, ...	Lithuanian,	Miner.	25	S.	Lytle, ...			Leg fractured by coal that burst from face while erecting prop near face of breast.
Nov.	7	William Miseeza, ...	Polish, ...	Miner, ...	47	M.	Lytle, ...			Face and hands burned. While igniting fuse to fire blast at face of breast he ignited the gas.
	10	Stiney Yasmulskie,	Austrian, ...	Miner, ...	25	M.	Lytle, ...			Face and hands burned. While igniting fuse to explode a blast they ignited gas at face of breast.
		Frank Werjock, ...	Austrian, ...	Laborer, ...	24	S.				
Dec.	21	Joseph Krazinskey, ..	American, ..	Miner, ...	24	S.	Lytle, ...			Face and hands burned. He ignited gas when he struck match near face of breast to arrange piece of slate at top of breast manway, to prevent it following his butty who went down the gangway.

Accident at Pine Hill Colliery Shaft

A serious accident occurred April 22 at 3.10 P. M. at the Pine Hill Colliery of the Pine Hill Coal Company, in which four men were killed. They were ascending the shaft and when at a distance of 429 feet from the bottom they were thrown from the cage.

I arrived at the shaft at seven o'clock in the evening and went down the air compartment. I found the cage tipped in the shaft. It is an automatic or self-dumping cage.

On the following day Inspector Curran accompanied me to the Colliery. We remained until the cage was removed from the shaft and a new one was put in position. An inspection failed to show any damage done except to a few guide rails that guided the cage and one corner post had been moved slightly at the place where the cage was stopped by the engineer.

On the 24th of the month, in compliance with a request from the Department, Inspectors Charles J. Price, P. C. Fenton and John Curran, went with me to make another inspection of the shaft and cage. The shaft seemed to be in safe condition and no cause for the accident could be ascertained.

Two causes are submitted, either one of which might have resulted in the accident:—

1. The cage being automatic or self-dumping has an iron plate 6 inches wide by $\frac{5}{8}$ inches thick running parallel with the cage shoe. Above the top of the cage there is a piece of similar iron extending to the shaft guide, which is shaped to act as a shoe independent of the cage shoes to prevent the automatic part of the cage from working. There is a pit formed in the bottom of the cage that holds the cars in position at the ends. There is also at each end of the pit a bar placed across the cage to keep the men in while being hoisted. The men have a habit of removing one of these bars and getting on the end of the cage. The cage is so balanced that one person's weight will move it, throwing the shoe forward and tight against the guide. Should any of the joints where the guides connect extend, the shoe would enter and fracture the guide, permitting the cage to fall. While present at the top of the shaft Inspector Price and others saw a car load come up and one of the men had the protecting bar in his hand.

2. One or more of the men who may have been out of the false or depressed bottom and standing on the edge of the cage may have fallen towards the end of the shaft. The cage striking him could upset. There were several cages of men hoisted the evening of the accident, one cage just a few moments before it occurred. One of the engineers, James Smith, employed at the colliery for seven years, said he had never had any trouble with the cage. Henry Krobart, who rode on the cage just previous to the accident told Mine Inspector Price he had seen no obstructions to interfere with the cage.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Otto, Pine Knot, Wadesville, Phoenix Park, Glendower, John Veith.—Ventilation, drainage and condition as to safety, good.

LYTLE COAL COMPANY

Lytle.—Ventilation, drainage and condition as to safety, good.

PINE HILL COAL COMPANY

Pine Hill.—Ventilation, drainage and condition as to safety, good.

ST. CLAIR COAL COMPANY

St. Clair.—Ventilation, drainage and condition as to safety, good.

OAK HILL COAL COMPANY

Oak Hill.—Ventilation and condition as to safety, good. The drainage is bad except in a few places. It is difficult to get the operator and the officials to keep the ditches open and the tracks clear of water and mud.

BUCK RUN COAL COMPANY

Buck Run.—Ventilation, drainage and condition as to safety, good.

MT. HOPE COAL COMPANY

Mt. Hope.—Ventilation fair. Drainage and condition as to safety, good.

WHITE AND COMPANY

Howard.—Ventilation and condition as to safety, good. Drainage fair.

DARKWATER COAL COMPANY

Newcastle.—Ventilation and drainage, fair. Condition as to safety, good.

JOHN H. DAVIS COMPANY

Ellsworth.—Ventilation fair. Condition as to safety and drainage, good.

BUTCHER CREEK COAL COMPANY

Laurel Run.—Ventilation and drainage, fair. Condition as to safety, good.

BLACK HEATH COAL COMPANY

Black Heath.—Ventilation, drainage and condition as to safety, good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Otto Colliery.—Completed inside: Haulage tunnel from Bottom Split vein to Skidmore vein, 4th lift, White Ash Slope.

Sinking of air shaft 10 feet by 10 feet at White Ash slope.

Haulage tunnel from Skidmore vein to Bottom Split vein in 2nd lift, Skidmore slope.

Extension of Old White Ash slope.

Sump gangway and pump house on 6th lift, White Ash slope.

Haulage tunnel from Middle Split vein to Bottom Split vein on 5th lift, shaft workings.

Haulage tunnel from Middle Split vein to Bottom Split vein in 6th lift gangway, White Ash slope.

Electric lighting.

In progress inside: Haulage tunnel from Top Split vein to Primrose vein, 7th lift of shaft.

Air tunnel from Top Split vein to Primrose vein, 7th lift of shaft.

Completed outside: Installation of two 6 by 18 foot tubular boilers.

Electric lighting.

Steam shaker at breaker tip.

In progress outside: Erecting 21-foot fan and engine at New air shaft at White Ash slope.

Pine Knot Colliery.—Completed inside: Opening of 2nd lift at new location, elevation 512.0 in No. 2 shaft.

Haulage tunnel, 8 feet by 72 feet, from East Middle Split, South dip, to Holmes vein, at Breast No. 26, 1st level, No. 2 Shaft.

Air tunnel, 6 feet by 8 feet, from East Middle Split, South dip, to Holmes vein, at Breast No. 26½, 1st level, No. 2 Shaft.

Haulage tunnel, 8 feet by 12 feet, from East Middle Split, North dip, to Top Split, North dip, 3rd level, No. 1 Shaft.

Air Tunnel, 7 feet by 8 feet, from East Middle Split, North dip, to Top Split, North dip, 3rd level, No. 1 Shaft.

In progress—Inside: Traveling-way in Skidmore vein, No. 1 to No. 2 Shaft.

Completed—Outside: Installation of power plant; also power line from Pine Knot to Glendower.

Thomaston Section (Pine Knot Colliery).—Completed—Inside: Haulage tunnel from East Bottom Split, North dip, to Top Split, North dip, at Breast No. 21, Level Lelar Slope.

Air tunnel from East Bottom Split, North dip, to Top Split, North dip, at Breast No. 20½, 3rd level Lelar Slope.

Completed—Outside: 18-foot engine for Lelar Slope fan.

Wadesville Colliery.—The Primrose-Holmes haulage tunnel, Beechwood Water Level drift, has been completed; actual distance, 37 yards.

A haulage tunnel has been driven north from the West Skidmore gangway, Beechwood Water Level Drift, to the Seven Foot vein, a distance of 17 yards, and gangways have been turned east and west on the Seven Foot vein.

A haulage tunnel is being driven south from the East Skidmore gangway, Beechwood Water Level Drift, to the Bottom Split of the Mammoth vein; estimated length, 33 yards.

The Beechwood Shaft has been completed to the Seven Foot vein, an actual distance of 545 feet, and is now being used to ventilate the West Skidmore Plane gangway through two airholes driven from the West Skidmore gangway, 2nd lift, West Skidmore Plane.

The Mammoth vein is being stripped for a distance of 1,600 feet east and 200 feet west of the old Beechwood Slope.

A haulage tunnel is being driven south from the West Holmes, South dip, 4th lift, Vulcan Slope, to the North dip, Holmes vein; estimated length, 17 yards.

A traveling-way is being driven from the No. 2 lift, Vulcan Slope, to the surface.

The Holmes Slope is being continued to the 4th lift.

A haulage tunnel is being driven from the East Seven Foot gangway, 2nd lift, Holmes Slope, north to the Mammoth vein, through a slip fault; estimated length, 58 yards.

The haulage tunnel reported as being driven south from the East Seven Foot gangway, shaft level, to the Bottom Split of the Mammoth vein, has been driven to the Old East Top Split gangway, shaft level. From this tunnel a gangway has been turned west in the Bottom Split of the Mammoth vein; length of tunnel, 130 yards; distance to Bottom Split vein, 88 yards. In the East Top Split gangway shaft level, Breast No. 73 is being prepared for the installation of a self-acting plane.

The fire-proof stable in the East Seven Foot gangway, shaft level, has been completed.

A haulage tunnel is being driven south from the East Skidmore gangway No. 1 lift, West Skidmore Plane, to the Bottom Split of the Mammoth vein; estimated length, 107 yards.

A haulage tunnel is being driven south from the East Seven Foot gangway, No. 1 lift, East Skidmore Plane, to the Skidmore vein; estimated length, 39 yards.

Phoenix Park Colliery.—Completed—Inside: 4-inch diamond drill drainage bore hole from Peach Mountain Slope to Tracy Power Plane, 1st lift.

Tunnel through Local Basin, East 1st lift to No. 6 Tracy Slope.

Tunnel from Peach Mountain vein to Little Tracy vein, Peach Mountain Slope.

In progress—Inside: Sinking No. 6 Tracy Slope.

Sinking No. 1 Underground Slope (Diamond vein).

Driving tunnel from Tracy vein to Little Tracy vein, Old Level of No. 6 Tracy Slope.

Driving tunnel from Peach Mountain vein to Little Tracy vein, Peach Mountain Slope.

Driving air tunnel from Peach Mountain vein to Little Tracy vein, Peach Mountain Slope.

Hospital, Peach Mountain Slope.

Completed—Outside: Self-acting landing at breaker tip.

Glendower Colliery.—Completed—Inside: Water Level tunnel north to Jugular Basin at Richardson.

Traveling-way in Seven Foot vein from Lower lift to Glendower Level.

In progress—Inside: Basin Slope from 2nd Level to Old workings from Glendower Colliery.

John Veith Colliery.—Completed—Inside: Traveling-way from No. 1 to No. 2 Shaft in East Primrose.

LYTLE COAL COMPANY

Lytle Colliery.—Outside: No. 2 air shaft sunk a total depth of 810 feet to the Top Member vein, and a 6 by 12 foot reversible steel fan, running 165 revolutions a minute, connected by belt to a 100-

horse-power motor, placed on the same to ventilate the North dip workings.

Installed two batteries of Vulcan boilers, 300 horse-power each, and raised the steam pressure to 120 pounds.

Built a new slush conveyor line.

Installed a double strand, Coldran chain, conveyor, with flights 12 inches by 30 inches, to handle the dry product in breaker, eliminating two 24-inch elevators.

Built 6 new cages for shaft, with a new pattern safety dog.

Inside: 4th Level: Tunnel and air tunnel from Little Buck Mountain to Buck Mountain vein.

The tapping of the water from the Lower Lift of Wadlinger's Slope in the Diamond vein, completed.

Fifth Level:—No. 6 White Ash Slope completed, and turnout made on the Top Lift and the Second Lift.

Sixth Level: The empty and loaded car roads were completed to shaft.

Tunnel and air tunnel from Top Member to Bottom Member in the West North dip.

Installed one 8-ton Jeffrey electric locomotive.

PINE HILL COAL COMPANY

Pine Hill Colliery.—Outside: Installed new Maxim 750 horse-power boiler.

Constructed slate plane and erected engine on it.

Constructed addition to machine shop, 40 feet by 30 feet.

Inside: Installed Triplex electric pump in 4th level, capacity, 1,000 gallons per minute.

Haulage tunnel, driven Red Ash to Buck Mountain, 316 feet.

Air tunnel driven Red Ash to Buck Mountain, 318 feet.

Constructed fireproof engine house for new 5th level slope.

OAK HILL COAL COMPANY

Oak Hill Colliery.—Inside: An air tunnel was driven in the South Basin, 5th level, from the Seven Foot bed to the Skidmore bed, a distance of 39 feet, to take the return air from 5th level.

On the 5th level, South Basin, a tunnel was driven from the Skidmore bed through the Seven Foot bed to the Buck Mountain, to deliver coal from the West Seven Foot and Buck Mountain to the bottom of the shaft.

A haulage tunnel was driven on the 4th level, South Basin, from the Skidmore bed to the Black Heath bed, a distance of 142 feet.

The machine shop built in 1913 was equipped with one 36-inch lathe, one 36-inch planer, one 60-inch ratchet drill, one emery grinder, one 36-inch band saw, and one 12-inch air compressor.

BUCK RUN COAL COMPANY

Buck Run Colliery.—Outside: A new head-frame of yellow pine has been erected, and gunboats with a capacity of two mine cars each, have been installed on the coal slope.

The work of rebulding the breaker was practically finished.

A new barn has been erected to take the place of the one destroyed by fire in April.

Inside: The Coal slope and the Tender slope have been extended to the Third level and the proper tunnels driven near them to handle the empty and loaded cars in an economical way. A tunnel has also been driven from the West Seven Foot, Third level, South dip, across the basin to the Buck Mountain vein, on the North dip. A second tunnel across the basin on the Third level was partly driven and will be finished early in 1915.

The ribs of the Coal slope from the Third level up within a short distance below the second level have been lined with concrete, and across the top of the concrete steel girders have been placed to serve as collars, thus making a very permanent job. Similar work was started on the Tender slope and will be continued as fast as possible.

A great many steel frames, instead of timber, have been used on the Third level gangways and turnouts.

DARKWATER COAL COMPANY

New Castle Colliery.—Outside: A new breaker of yellow pine, with a capacity of 700 tons per day has been erected on the site of the old breaker, and a separator of structural steel has been built.

Inside: The Coal slope has been sunk from the Second to the Third level, and the proper tunnels driven near it for handling the empty and loaded cars. A tunnel has also been driven from the East Skidmore, Third level, South dip, to the Mammoth, and also tunnel to the Mammoth from the West Skidmore, Second level, South dip.

TWENTIETH DISTRICT

SCHUYLKILL AND DAUPHIN COUNTIES

Lykens, Pa., February 27, 1915.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Twentieth Anthracite District, for the year ending December 31, 1914.

Respectfully submitted,

CHARLES J. PRICE,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	7
Number of mines,	28
Number of mines in operation,	24
Number of tons of coal shipped to market,	1,644,887
Number of tons used at mines for steam and heat,	418,917
Number of tons sold to local trade and used by employes,	41,643
Number of tons produced,	2,105,447
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	4,443
Number of persons employed outside,	1,511
Number of fatal accidents inside of mines,	10
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	28
Number of non-fatal accidents outside,	7
Number of tons of coal produced per fatal accident inside,	210,545
Number of tons produced per fatal accident outside,	1,052,723
Number of tons produced per fatal accident inside and outside,	175,454
Number of persons employed per fatal accident inside,	444
Number of persons employed per fatal accident outside,	755
Number of persons employed per fatal accident inside and outside,	496
Number of persons employed per non-fatal accident inside,	159
Number of persons employed per non-fatal accident outside,	216
Number of persons employed per non-fatal accident inside and outside,	170
Number of wives made widows,	7
Number of children made orphans,	17
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	18
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	23
Number of electric motors used outside,	4
Number of gasoline locomotives used inside,	2
Number of fans in use,	23
Number of furnaces in use,	.....
Number of gaseous mines in operation,	23
Number of non-gaseous mines in operation,	1
Number of new mines opened,	1
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,019,118
Susquehanna Coal Company,	893,739
Lehigh Valley Coal Company,	192,590
Total,	2,105,447

Production by Counties

Schuylkill,	1,211,708
Dauphin,	893,739
Total,	2,105,447

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	3	.....	3	14	2	16	339,706	72,794	2,290	598	2,888	763	.....	163	299
Susquehanna Coal Co.,	6	2	8	13	3	16	148,956	68,749	1,697	772	2,469	283	386	130	257
Lehigh Valley Coal Co.,	1	.....	1	1	2	3	192,590	192,590	456	141	597	456	.....	456	70
Totals and averages,	10	2	12	28	7	35	210,545	75,194	4,443	1,511	5,954	444	755	159	216

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	1	....	....	....	....	....	....	....	....	....	1	10.00
Falls of slate,	....	....	....	1	....	....	....	....	....	....	....	....	1	10.00
Falls of roof,	....	1	....	....	....	....	....	....	....	....	....	....	1	10.00
Mine cars,	....	....	....	....	....	....	1	....	....	1	....	....	2	20.00
Explosions of gas,	....	2	....	....	....	....	....	....	....	....	....	....	2	20.00
Suffocation by gas, etc.	....	....	1	....	....	....	....	....	....	....	....	....	1	10.00
Struck by piece of coal,	....	....	1	....	....	....	....	....	....	....	....	....	1	10.00
Struck by piece of rock	....	....	....	....	....	....	....	....	1	....	....	....	1	10.00
Totals,	....	3	3	1	....	....	1	....	1	1	....	....	10	100.00
Outside														
Cars,	....	....	....	....	....	....	....	....	....	....	....	1	1	50.00
Struck by timber,	....	....	....	....	1	....	....	....	....	....	....	....	1	50.00
Totals,	....	....	....	....	1	....	....	....	....	....	....	1	2	100.00
Grand totals inside and outside,	....	3	3	1	1	....	1	....	1	1	....	1	12	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	2	1	....	....	1	....	....	....	....	4	14.28
Falls of slate,	....	....	....	....	....	....	....	....	....	1	1	....	2	7.14
Falls of roof,	....	1	....	....	....	....	....	....	1	....	....	....	2	7.14
Mine cars,	....	2	....	....	1	....	....	....	....	3	....	....	6	21.43
Explosions of gas,	....	....	1	....	....	....	....	....	....	2	1	....	4	14.29
Blasts, premature and otherwise,	....	....	....	....	....	....	1	....	....	....	2	....	3	10.72
Falling into slopes, etc.,	....	....	....	....	....	....	....	1	....	....	....	....	1	3.57
Mules,	....	....	....	1	1	....	....	1	....	....	....	....	3	10.72
Struck by piece of slate,	....	....	....	....	1	....	....	....	....	....	....	....	1	3.57
Falling,	....	....	1	....	....	....	....	....	....	....	....	....	1	3.57
Struck by timber,	....	....	....	....	....	....	....	....	....	1	....	....	1	3.57
Totals,	....	3	2	3	4	....	1	3	1	7	4	....	28	100.00
Outside														
Cars,	....	....	1	....	....	....	1	....	....	1	1	....	4	57.14
Machinery,	....	....	....	....	....	....	....	....	....	1	....	....	1	14.29
Struck by timber,	....	....	....	1	....	....	....	....	....	....	....	1	2	28.57
Totals,	....	....	1	1	....	....	1	....	....	2	1	1	7	100.00
Grand totals inside and outside,	....	3	3	4	4	....	2	3	1	9	5	1	35	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	1	2	1	....	....	1	....	....	....	....	....	5
Miners' laborers,	....	....	....	....	....	....	....	....	1	1	....	....	2
Drivers and runners,	....	1	....	....	....	....	....	....	....	....	....	....	1
Timbermen,	....	....	1	....	....	....	....	....	....	....	....	....	1
Rockmen,	....	1	....	....	....	....	....	....	....	....	....	....	1
Totals,	....	3	3	1	....	....	1	....	1	1	....	....	10
Outside													
Laborers,	....	....	....	....	1	....	....	....	....	....	....	....	1
Motor conductors,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	....	....	....	....	1	....	....	....	....	....	....	1	2
Grand totals inside and outside,	....	3	3	1	1	....	1	....	1	1	....	1	12

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	....	2	2	1	....	1	2	1	3	3	....	15
Miners' laborers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Drivers and runners,	....	1	....	1	1	....	....	....	....	2	....	....	5
Company men,	....	....	....	....	1	....	....	....	....	....	....	....	1
Repairmen,	....	....	....	....	1	....	....	....	....	....	....	....	1
Timbermen,	....	2	....	....	....	....	....	....	....	....	....	....	2
Loaders,	....	....	....	....	....	....	....	1	....	....	....	....	1
Rockmen,	....	....	....	....	....	....	....	....	....	....	1	....	1
Topmen,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	....	3	2	3	4	....	1	3	1	7	4	....	28
Outside													
Oilers,	....	....	....	....	....	....	....	....	....	....	....	1	1
Laborers,	....	....	1	1	....	....	1	....	....	2	1	....	6
Totals,	....	....	1	1	....	....	1	....	....	2	1	1	7
Grand totals inside and outside,	....	3	3	4	4	....	2	3	1	9	5	1	35

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	3	3	....	....	....	1	....	1	1	....	1	10
Polish,	....	....	....	1	....	....	....	....	....	....	....	....	1
Slavonian,	....	....	....	....	1	....	....	....	....	....	....	....	1
Totals,	....	3	3	1	1	....	1	....	1	1	....	1	12

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	2	1	3	4	....	2	1	1	5	4	1	24
German,	....	1	1	....	....	....	....	1	....	1	....	....	4
Polish,	....	....	....	....	....	....	....	....	....	1	....	....	1
Italian,	....	....	....	....	....	....	....	....	....	....	1	....	1
Slavonian,	....	....	....	1	....	....	....	....	....	....	....	....	1
Lithuanian,	....	....	....	....	....	....	....	1	....	....	....	....	1
Austrian,	....	....	....	....	....	....	....	....	....	1	....	....	1
Russian,	....	....	1	....	....	....	....	....	....	1	....	....	2
Totals,	....	3	3	4	4	....	2	3	1	9	5	1	35

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
Lincoln Colliery:															
Lincoln No. 1, ...	Slope,.....	Gaseous,...	Fan, ...	21	7	6	90	2.4	Guibal, ...	Steam,.....	40	250,000	250,000	260,000	974
Lincoln No. 2, ...	Slope,.....	Gaseous,...	Fan, ...	18	6	5.3	85	1.6	Guibal, ...	Steam,.....					
Lincoln No. 2, Vein Trial,	Slope,.....	Gaseous,...	Fan, ...	12	4	4	90	.7	Guibal, ...	Electricity,.					
Lincoln Shaft, ...	Shaft, ...	Gaseous,...	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	....
Good Spring Colliery:															
Good Spring No. 1, ...	Slope,.....	Gaseous,...	Fan, ...	18	6	5	95	.8	Guibal, ...	Steam,.....	18	162,500	162,500	166,700	511
Good Spring No. 2, Tender	Slope, ...	Gaseous,..	Fan, ...	15	4.5	5	85	1.1							
Good Spring No. 3, ...	Slope,.....	Gaseous,...	Fan, ...	18	6	5	70	.9							
				18	6	5	70	.8							
Brookside Colliery:															
Brookside No. 1, ...	Slope,.....	Gaseous,...	Fan, ...	18	6	5	90	1.3	Guibal, ...	Steam,.....	23	213,000	213,000	221,000	805
Brookside No. 4, ...	Slope,.....	Gaseous,...	Fan, ...	18	6	5	80	.8							
Brookside Shaft, ...	Shaft, ...	Gaseous,...	Fan, ...	21	7	6	75	1.1							
Brookside Tender, ...	Slope, ...	Gaseous,..	Fan, ...	14	4	5	100	1.4							
Valley View Colliery:															
Valley View No. 1,*	Tunnel, ...	Gaseous,...	Fan, ...	12	4	4	.....	.....	.....	.....	....	.....	.....	.....	....
Valley View No. 2,*	Drift, ...	Non-gas.,.	Natural, ..	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	....
Valley View No. 3,*	Drift, ...	Non-gas.,.	Natural, ..	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	....

*Idle.

Susquehanna Coal Co.															
Williamstown Colliery:															
Williamstown No. 1, ...	Shaft,.....	Gaseous,...	2 Fans, ...	25	8	7	60	2.2	Guibal, ...	Steam,....	29	136,500	136,500	152,000	749
				10	3	3	70	.8	Vulcan, ...						
Williamstown No. 2, ...	Shaft, ...	Gaseous,...	Fan, ...	25	8	7	60	1.8	Guibal, ...						
Williamstown No. 3, ...	Slope,.....	Gaseous,...	Fan, ...	25	8	7	60	1.4	Guibal, ...						
Bear Valley, ...	Slope,.....	Gaseous,...	Fan, ...	14	4	4	62	1.2	Guibal, ...						
Big Lick, ...	Slope,.....	Gaseous,..	Fan, ...	10	5	5	52	.8	Vulcan, ...						
Short Mountain Colliery:															
Short Mountain, ...	Slope,.....	Gaseous,...	Fan, ...	25	8	7	60	1.2	Guibal, ...	Steam,....	25	170,000	170,000	182,000	948
Lykens Valley, ...	Slope, ...	Gaseous, ..	Fan, ...	16	4	4	100	.9	Guibal, ...	Steam,....					
Underground No. 4, ...	Slope,.....	Gaseous,...	Fan, ...	25	8	7	60	1.4	Guibal, ...	Steam,....					
Bear Gap (2) Slopes, ...	Tunnel, ...	Gaseous,...	Fan, ...	10	2.5	2.5	70	.7	Vulcan, ...	Electricity					
Drift No. 1, ...	Drift, ...	Non-gas.,.	Natural, ..	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	....
Lehigh Valley Coal Co.															
Blackwood Colliery:															
Blackwood No. 1, ...	Tunnel, ...	Gaseous,...	Fan, ...	20	6	5.5	80	1.3	Guibal, ...	Steam,....	33	130,700	130,700	135,000	459
Dundass No. 2, ...	Tunnel, ...	Gaseous,...	Fan, ...	12	4	3	90	.8	Guibal, ...	Oil, ...					
Tunnel No. 4, ...	Tunnel, ...	Gaseous,...	†	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	....
Shaft,‡	Shaft, ...	.....	.....	.....	.....	.....	.....	.....	.....	.....					

†Ventilated by fan at Blackwood No. 1.
‡New mine being opened. No coal mined.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co. Lincoln, Good Spring, Brookside, Valley View, Rausch Creek Washery, Middle Creek Washery,	Schuylkill,	Edward E. Kaercher,	Pottsville,	Reese Tasker, Mine Supt. M. J. Doyle, Div. Supt. J. H. Lee, Outside Supt. R. J. Schneider, Inside Supt.	Pottsville, Tremont, Tremont, Tremont,	Philadelphia and Reading
Susquehanna Coal Co. Williamstown, Short Mountain, Short Mountain Washery, Williamstown Washery,	Dauphin,	Robert A. Quin,	Wilkes-Barre,	William Auman, Outside Supt. M. J. Readdy, Inside Supt.	Lykens,	Pennsylvania
Lehigh Valley Coal Co. Blackwood,	Schuylkill,	F. M. Chase, General Manager.	Wilkes-Barre,	Thomas R. Jones,	Mahanoy City,	Lehigh Valley

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.													
Lincoln,	Schuylkill,	375,196	81,492	7,161	463,849	226	1,181	2	7	74,425	85,885	16,662	108
Good Spring,		221,795	57,845	7,846	287,486	228	675	.....	2	25	138,424	28,979	84
Brookside,		232,471	34,896	50	267,417	225	1,022	1	7	14,200	38,829	14,787	109
Valley View,		.....	.....	191	191	.....	3	.....	.....	.....	.....	.....	1
		829,462	174,233	15,248	1,018,943	.....	2,881	3	16	88,650	263,138	60,428	302
Washeries:													
Middle Creek,		175	.....	.....	175	.....	3	.....	.....	.....	.....	.....	.....
Rausch Creek,		.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....
		175	.....	.....	175	.....	7	.....	.....	.....	.....	.....	.....
Totals,		829,637	174,233	15,248	1,019,118	.....	2,888	3	16	88,650	263,138	60,428	302
Susquehanna Coal Co.													
Williamstown,	Dauphin,	318,572	57,764	8,280	384,616	249	1,137	7	13	14,700	92,281	118,235	100
Short Mountain,		241,048	57,693	16,743	315,484	234	1,268	1	3	94,200	76,830	1,699	112
		559,620	115,457	25,023	700,100	.....	2,405	8	16	108,900	169,111	119,934	212
Washeries:													
Williamstown,		23,396	83,065	99	106,560	452	32	.....	.....	.....	.....	.....	.....
Short Mountain,		62,408	24,671	.....	87,079	341	32	.....	.....	.....	.....	.....	.....
		85,804	107,736	99	193,639	.....	64	.....	.....	.....	.....	.....	.....
Totals,		645,424	223,193	25,122	893,739	.....	2,469	8	16	108,900	169,111	119,934	212

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Lehigh Valley Coal Co.													
Blackwood,	Schuylkill,	169,826	21,941	1,273	192,590	190	507	1	3	250	62,921	56,517	19
		1,644,887	418,917	41,643	2,105,447	.....	5,954	12	35	197,800	495,170	236,879	533
Grand totals,	.....												

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	.....	.....	73	9,000	9,000	.....	9	.....	10	128	22,816	9	18,988	4,389	4	5
Susquehanna Coal Co.,	Dauphin,	6	1,000	92	11,175	12,175	.....	6	.....	11	140	14,740	9	14,680	4,767	5	7
Lehigh Valley Coal Co.,	Schuylkill,	.....	.....	10	1,500	1,500	2	3	.....	6	14	3,295	1	210	260	1	2
Totals,	.....	6	1,000	175	21,675	22,675	2	18	.....	27	282	40,851	19	33,878	9,416	10	14

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co., ...	Schuylkill, ...	5	23	34	604	257	118	37	3	411	798	2,290	....	9	32	111	35	11	13	387	598	2,888
Susquehanna Coal Co., ...	Dauphin, ...	4	8	30	557	127	155	16	34	4	762	1,697	2	4	60	156	83	....	12	455	772	2,469
Lehigh Valley Coal Co., ..	Schuylkill, ...	3	2	7	239	76	7	6	2	48	66	456	1	1	10	18	8	3	4	96	141	597
Totals, ...	.....	12	33	71	1,400	460	280	59	39	463	1,626	4,443	3	14	102	285	126	14	29	938	1,511	5,954

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	20	16	17	24	24	19	15	16	19	18	20	18	226
Susquehanna Coal Co.,	Dauphin,	21	17	21	23	24	15	13	17	24	23	23	20	241
Lehigh Valley Coal Co.,	Schuylkill,	14	8	15	23	24	25	.....	.....	13	26	21	21	190

TABLE 4.—Fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Feb. 4	M. E. Etzwiler, ...	American, ..	Rockman, ...	28	M.	1	3	Williamstown, ..	Dauphin, ...	Fatally injured by fall of rock at mouth of tunnel that they were driving. Died on the way home.
17	John Crozer, ...	American, ..	Miner, ...	55	M.	1	....	Williamstown, .	Dauphin, ...	Instantly killed by an explosion of gas in tunnel connecting two veins.
	Charles Raudenbush,..	American, ..	Driver, ...	29	S.	....	....			
March 10	Harry Lynch, ...	American, ..	Miner, ...	30	S.	...	....	Williamstown, ..	Dauphin, ...	Suffocated in breast when manway gave way and drew him into the gob.
	John Welker, ...	American, ..	Timberman, ...	31	M.	1	6	Williamstown, ..	Dauphin, ...	Instantly killed by being struck on head by a lump of coal that had been loosened by an explosion.
30	William Metz, ...	American, ..	Miner, ...	47	S.	....	...	Short Mountain,	Dauphin, ...	Instantly killed by fall of coal at face of breast.
April 22	John Mindure, ...	Polish,.....	Miner, ...	37	M.	1	3	Blackwood, ...	Schuylkill, ...	Instantly killed by fall of top slate at face of breast.
May 12	Michual Lavinski, ...	Slavonian, ..	Laborer, ...	37	M.	1	3	Williamstown, ..	Dauphin, ...	Fatally injured by log rolling over him on timber bank. Died the same night. Outside.
July 8	Charles Rumpf, ...	American, ..	Miner, ...	30	M.	1	2	Lincoln, ...	Schuylkill, ...	Fatally injured by being caught between top rail of car and collar. Died August 10.
Sept. 24	Milton Strohecker, ...	American, ..	Laborer, ...	55	M.	1	....	Brookside, ...	Schuylkill, ...	Fatally injured by being struck by rock that rolled down the slope. Died on his way to hospital.
Oct. 26	Amos Strauser, ...	American, ..	Laborer, ...	21	S.	....	....	Lincoln, ...	Schuylkill, ...	Instantly killed by being run over by trip of mine cars in water level tunnel.
Dec. 14	George Holloway, ...	American,..	Motor-conductor	21	S.	....	....	Williamstown, ..	Dauphin, ...	Fatally injured by being crushed between motor and mine cars. Died on his way to hospital. Outside.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Feb. 10	William H. Gwyther,	American, ..	Driver, ...	18	S.	Short Mountain, ...	Dauphin, ...	Pelvis fractured. Caught between mule and mine car at door.
19	Elmer Shade, ...	American, ..	Timberman, ...	30	M.	Williamstown, ...	Dauphin, ...	Leg broken by fall of rock on plane while timbering.
26	George Faust, ...	German, ...	Timberman, ...	62	M.	Short Mountain, ...	Dauphin, ...	Leg broken in two places and collar bone fractured. Struck by runaway car at bottom of plane.
March 6	Michual O'Lenak, ...	Russian, ...	Miner, ...	25	S.	Williamstown, ...	Dauphin, ...	Face and hands burned by explosion of gas at face of breast.
12	Grant Lins, ...	American, ..	Laborer, ...	23	M.	Brookside, ...	Schuylkill, ...	Leg fractured. Caught between mine car and locomotive. Outside.
20	Philip Reidinger, ...	German, ...	Miner, ...	60	S.	Lincoln, ...	Schuylkill, ...	Collar bone fractured. He fell at face of breast.
April 8	William Clouser, ...	American, ..	Miner, ...	32	M.	Williamstown, ...	Dauphin, ...	Ribs broken and face injured by fall of coal at face of breast.
13	John Dudosh, Sr., ...	Slavonian, ..	Laborer, ...	45	M.	Williamstown, ...	Dauphin, ...	Leg fractured by log rolling on it on timber bank. Outside.
22	Isaac Nelson, ...	American, ..	Driver, ...	23	S.	Brookside, ...	Schuylkill, ...	Arm broken and face injured. Kicked by mule on gangway.
23	James Katerman, ...	American, ..	Miner, ...	33	M.	Good Spring, ...	Schuylkill, ...	Leg fractured by fall of coal at face of breast.
May 14	Charles Rine, ...	American, ..	Company man, ...	62	M.	Good Spring, ...	Schuylkill, ...	Leg fractured. Struck by lump of slate that rolled down manway of breast.
19	Reese Williams, ...	American, ..	Driver, ...	21	S.	Williamstown, ...	Dauphin, ...	Foot badly lacerated. Caught between car and platform on gangway.
22	Harry Grim, ...	American, ..	Repairman, ...	38	S.	Brookside, ...	Schuylkill, ...	Legs fractured by being caught between horse and timber on gangway. The sprag in car wheel caught leg of horse.
	Warner Reebsam, ...	American, ..	Miner, ...	26	M.	Lincoln, ...	Schuylkill, ...	Arm fractured by fall of coal at face of breast.
July 14	Edward Yoder, ...	American, ..	Miner, ...	27	M.	Lincoln, ...	Schuylkill, ...	Seriously injured by shot at face of gangway.
30	Joseph Buggy, ...	American, ..	Laborer, ...	21	S.	Williamstown, ...	Dauphin, ...	Hand crushed. Run over by mine car while spragging. Outside.

TABLE 5.—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Aug. 11	Joseph Labord, ...	Lithuanian,	Miner, ...	36	M.	Williamstown, ...	Dauphin, ...	Ribs broken and body bruised by fall of coal in breast heading.
19	Frank Mokowychock,..	German, ...	Miner, ...	38	M.	Brookside, ...	Schuylkill, ...	Leg fractured by falling down manway of breast.
20	George Feaster, ...	American, ..	Loader, ...	37	M.	Williamstown, ...	Dauphin, ...	Compound fracture of leg. Mule tramped on him on gangway.
Sept. 16	William E. Schoffstall,	American, ..	Miner, ...	63	M.	Short Mountain, ...	Dauphin, ...	Wrist broken and body badly bruised by fall of rock at face.
Oct. 3	Stephen Leeso, ...	Austrian, ..	Miner, ...	32	S.	Williamstown, ...	Dauphin, ...	Slightly burned by explosion of gas at face of breast.
8	Val. Rotishock, ...	German, ...	Miner, ...	43	M.	Williamstown, ...	Dauphin, ...	Collar bone broken by fall of slate at face of breast.
12	John Pitzer, ...	Polish,.....	Driver, ...	36	M.	Brookside, ...	Schuylkill, ...	Collar bone broken. Caught between mine car and rib of tunnel.
13	Charles Bensinger, ...	American, ..	Laborer, ...	18	S.	Lincoln, ...	Schuylkill, ...	Foot crushed. He slipped under wheel of car while pushing it at bottom of slope.
24	Paul Horwortht, ...	Russian, ...	Laborer, ...	43	M.	Blackwood, ...	Schuylkill, ...	Ribs broken and injured internally by mine cars near head of breaker. Outside.
25	Grant Shuey, ...	American, ..	Driver, ...	21	S.	Brookside, ...	Schuylkill, ...	Bone of leg split. Struck by prop that mine car knocked out when it jumped off track near head of plane.
26	Michuael Kussohler, ..	American, ..	Topman, ...	22	S.	Lincoln, ...	Schuylkill, ...	Forearm broken. He slipped and arm was caught under wheel of car while pushing cars at head of slope.
28	Harry Rumberger, ...	American, ..	Laborer, ...	30	M.	Blackwood, ...	Schuylkill, ...	Compound fracture of leg. Caught on shaft of conveyor line near breaker. Outside.
31	William Stutzman, ...	American, ..	Miner, ...	29	M.	Brookside, ...	Schuylkill, ...	Slightly burned by explosion of gas at draw-hole of battery on gangway.
Nov. 5	Harry C. Spade, ...	American, ..	Laborer, ...	24	M.	Williamstown, ...	Dauphin, ...	Leg broken. Caught between mine cars at head of shaft. Outside.
14	Joseph Bolton, ...	American, ..	Miner, ...	41	M.	Williamstown, ...	Dauphin, ...	Head and body injured by being struck by debris from shot in chute near face of gangway.
24	Harry Frank, ...	Italian, ...	Rockman, ...	25	M.	Blackwood, ...	Schuylkill, ...	Body injured by being struck by debris from shot in tunnel.

Nov.	24	Dennis Campbell, ...	American, ..	Miner, ...	39	S.	Lincoln, ...	Schuylkill, ...	Head and face badly injured by fall of slate at face of breast.
	27	Earl Spittle, ...	American, ..	Miner, ...	35	S.	Williamstown, ...	Dauphin, ...	Slightly buried by explosion of gas and body bruised by falling down manway of breast.
Dec.	30	John Keefer, ...	American, ..	Oiler, ...	19	S.	Lincoln, ...	Schuylkill, ...	Leg broken below knee by timber falling on it. Outside.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Lincoln, Good Spring and Brookside.—Ventilation, drainage and condition as to safety, good.

SUSQUEHANNA COAL COMPANY

Williamstown and Short Mountain.—Ventilation and condition as to safety, good. Drainage, fair.

LEHIGH VALLEY COAL COMPANY

Blackwood.—Ventilation, drainage and condition as to safety, good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Lincoln Colliery.—An inside slope on the Lykens Valley No. 2 vein, East gangway, from the 6th to 8th lifts, a distance of 725 feet, has been completed.

A tunnel from the Bottom Bench of the No. 4 vein to Top Bench of No. 4 vein, west 6th lift, a distance of 36 feet, has been driven.

Electric haulage has been extended on the West No. 2 vein, 4th lift, gangway, to breast No. 142.

Good Spring Colliery.—Tunnels have been driven as follows: At No. 1 slope, 3rd lift, from East Mammoth gangway at breast No. 50 to Orchard vein, a distance of 519 feet; from East Mammoth gangway at breast No. 83 to Orchard vein, a distance of 541 feet; at No. 1 slope, 3rd lift, from Four Foot vein, west of slope, to Orchard vein, a distance of 515 feet; at No. 1 slope, 3rd lift, from West Bottom Bench gangway, to Skidmore vein, a distance of 87 feet; at No. 1 slope, 3rd lift, from West Bottom Bench gangway at breast No. 75, to Orchard vein, a distance of 304 feet.

A Tender slope has been sunk on Mammoth vein from 3rd to 4th lift.

A saw mill, with steam drag saw, was erected.

Brookside Colliery.—A backswitch and run-around tunnel has been driven at shaft on 5th level, a distance of 237 feet.

An air tunnel on No. 4 plane level has been driven on the level of main headings between Nos. 4 and 5 veins, a distance of 168 feet.

A tunnel driven from No. 4 vein to No. 5 vein, a distance of 91 feet, on third level, east side, at breast No. 55.

A single track slope has been sunk on the No. 5 vein, from the water level tunnel to No. 1 slope workings ,a distance of 393 feet.

A high stage compressed air plant is being installed for haulage on the 3rd and 5th levels.

Completed the rebuilding of the west breaker, which was put in operation August 5.

The East breaker has been abandoned.

A 365,000 gallon concrete storage reservoir for breaker wash-water has been built 630 feet west of No. 4 slope.

An oil house was built.

SUSQUEHANNA COAL COMPANY

Williamstown Colliery.—In No. 2 shaft counter, tunnels have been driven to car hoist, from Rock plane, south, and air tunnels from top of plane, from West No. 9½ vein to No. 11 vein, also from No. 11 vein to No. 9 vein. Also tunnels from Little vein, south, to red shale; from West Little vein to West Lykens vein; from No. 9½ vein to No. 11 vein in No.1 shaft; in Bear Valley slope from No. 9 vein to No. 7 vein. Air tunnels were driven to White's vein; from West Lykens vein to Little vein; from East Little vein to East Lykens vein, and air slopes from No. 2 shaft counter, and trial slope in Zero vein.

A new hospital and fireproof stable were built in No. 1 shaft. A tunnel from Big Lick slope to White Ash measures was driven. Outside.—Additional battery of boilers at Big Lick, new water tank, new fan at Big Lick slope, and an air compressor, were erected. Eighty-five new mine cars were built.

Short Mountain Colliery.—A four-compartment shaft is being sunk which, when completed will be 1650 feet in depth. Distance sunk to January 1, 1915, was 1399 feet. Tunnels driven to meet shaft on the several levels: Old No. 1 level; No. 7 counter, No. 4 slope; No. 5 counter, No. 4 slope; No. 3 level; No. 4 level, No. 4 slope.

Other tunnels were driven as follows: No. 7 counter, Big vein east, to White's vein No. 4 slope; White's vein, East No. 1 level; White's vein basin slope No. 4 slope; Top of White's vein basin slope, and Pat Martin White Ash and Valentine cross-cut.

A new plane in White's vein, east, old No. 1 level. Airways have been driven in White's vein basin slope, and No. 7 counterNo. 4 slope. Outside.—101 new mine cars and dumpers have been built. A new fan, engine house, and steel trestle for boiler coal, have been erected.

LEHIGH VALLEY COAL COMPANY

Blackwood Colliery.—Tunnels were driven from Tracy to Skidmore veins on East side of Blackwood tunnel; West side, from Diamond to Orchard vein, and Primrose to Buck Mountain vein. A turnout tunnel was driven at foot of Tracy slope in Blackwood tunnel. Blackwood shaft completed and turnouts driven east and west at bottom.

A Goyne pump 14 by 8 by 18 was installed to pump water from 2nd level Blackwood shaft.

Outside: Erected fireproof hospital, foreman's office and lamp house at mouth of Blackwood tunnel.

TWENTY-FIRST DISTRICT

LACKAWANNA, SUSQUEHANNA, SULLIVAN AND WAYNE COUNTIES

Forest City, Pa., February 19, 1914.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines of the Twenty-first Anthracite District, for the year ending December 31, 1914.

Respectfully submitted,

BENJAMIN MAXEY,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	16
Number of mines,	38
Number of mines in operation,	38
Number of tons of coal shipped to market,	2,719,486
Number of tons used at mines for steam and heat,	291,778
Number of tons sold to local trade and used by employes,	64,528
Number of tons produced,	3,075,792
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	5,248
Number of persons employed outside,	2,086
Number of fatal accidents inside of mines,	16
Number of fatal accidents outside,	3
Number of non-fatal accidents inside of mines,	31
Number of non-fatal accidents outside,	1
Number of tons of coal produced per fatal accident inside,	192,237
Number of tons produced per fatal accident outside,	99,219
Number of tons produced per fatal accident inside and outside,	161,884
Number of persons employed per fatal accident inside,	328
Number of persons employed per fatal accident outside,	695
Number of persons employed per fatal accident inside and outside,	386
Number of persons employed per non-fatal accident inside,	169
Number of persons employed per non-fatal accident outside,	2,086
Number of persons employed per non-fatal accident inside and outside,	229
Number of wives made widows,	7
Number of children made orphans,	22
Number of steam locomotives used inside of mines,	2
Number of steam locomotives used outside,	23
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	46
Number of electric motors used outside,	1
Number of gasoline locomotives used inside,	3
Number of fans in use,	29
Number of furnaces in use,	.....
Number of gaseous mines in operation,	4
Number of non-gaseous mines in operation,	34
Number of new mines opened,	3
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Hillside Coal and Iron Company,	557,408
Hudson Coal Company,	452,181
Scranton Coal Company,	407,505
Lackawanna Coal Company, Limited,	346,976
Connell Anthracite Mining Company,	323,068
Mt. Jessup Coal Company, Limited,	260,322
Moosic Mountain Coal Company,	203,964
Northern Anthracite Coal Company,	174,951
Temple Coal Company,	157,771
O'Boyle-Foy Anthracite Coal Company,	71,143
Dolph Coal Company, Limited,	58,483
Carbondale Coal Mining Company,	28,419
Sacandaga Coal Company,	14,564
Clinton Falls Coal Company,	13,440
Wachna-Taylor Anthracite Coal Company,	5,597
Total,	3,075,792

Production by Counties

Lackawanna,	1,794,202
Susquehanna,	587,722
Sullivan,	574,759
Wayne,	119,109
Total,	3,075,792

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Hillside Coal and Iron Co.,	4	1	5	2	.....	2	139,352	278.704	1,204	335	1,539	301	335	602	.....
Hudson Coal Co.,	2	.....	2	6	.....	6	226,091	75,364	616	188	804	308	.....	103	.....
Scranton Coal Co.,	3	.....	3	4	.....	4	135,835	101,876	647	394	1,041	216	.....	162	.....
Lackawanna Coal Co., Limited,	2	.....	2	5	.....	5	173,488	69,395	569	162	731	285	.....	114	.....
Connell Anthracite Mining Co.,	.....	.....	.....	2	.....	2	.....	161.534	341	160	501	.....	.....	171	.....
Mt. Jessup Coal Co., Limited,	3	1	4	2	1	3	86,774	130,161	411	282	693	137	282	205	282
Moosic Mountain Coal Co.,	2	1	3	3	.....	3	101,982	67,988	342	53	395	171	53	114	.....
Temple Coal Co.,	.....	.....	.....	2	.....	2	.....	78,886	262	89	351	.....	.....	131	.....
O'Boyle-Foy Anthracite Coal Co.,	.....	.....	.....	2	.....	2	.....	35,572	161	71	232	.....	.....	81	.....
Dolph Coal Co., Limited,	.....	.....	.....	1	.....	1	.....	58,483	254	169	423	.....	.....	254	.....
Sacandaga Coal Co.,	.....	.....	.....	1	.....	1	.....	14,564	83	32	115	.....	.....	83	.....
Clinton Falls Coal Co.,	.....	.....	.....	1	.....	1	.....	13,440	36	21	57	.....	.....	36	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	322	130	452	.....	.....	.....	.....
Totals and averages,	16	3	19	31	1	32	192,237	99,219	5,248	2,086	7,334	328	695	169	2,086

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	....	....	1	....	....	....	....	....	....	....	....	1	6.25
Falls of roof,	....	....	....	....	....	1	3	....	....	2	2	....	8	50.00
Mine cars,	....	....	....	1	1	....	....	....	....	....	....	1	3	18.75
Blasts, premature and otherwise,	....	....	....	....	1	....	....	....	1	1	....	....	3	18.75
Mules,	....	....	....	....	....	....	....	1	....	....	....	....	1	6.25
Totals,	....	....	....	2	2	1	3	1	1	3	2	1	16	100.00
Outside														
Cars,	....	....	....	....	2	....	....	....	....	1	....	....	3	100.00
Totals,	....	....	....	....	2	....	....	....	....	1	....	....	3	100.00
Grand totals inside and outside,	....	....	....	2	4	1	3	1	1	4	2	1	19	.....

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Inside														
Falls of coal,	....	1	1	2	....	....	....	....	...	1	....	1	6	19.35
Falls of roof,	....	....	2	....	....	1	1	2	1	....	1	2	10	32.26
Mine cars,	1	....	2	....	....	....	....	....	2	....	1	2	8	25.81
Explosions of powder and dynamite,	1	....	....	....	....	....	....	....	....	....	....	....	1	3.22
Blasts, premature and otherwise,	....	....	1	....	....	....	....	....	....	....	....	2	3	9.68
Struck by piece of timber,	....	....	....	....	....	....	....	....	....	2	....	....	2	6.46
Struck by piece of coal	1	....	....	....	....	....	....	....	....	....	....	....	1	3.22
Totals,	2	1	6	2	....	1	1	2	3	3	2	7	31	100 00
Outside														
Struck by piece of timber,	....	....	....	....	....	1	....	....	....	....	....	....	1	100.00
Totals,	....	....	....	....	....	1	....	....	....	....	....	....	1	100.00
Grand totals inside and outside,	2	1	6	2	....	2	1	2	3	3	2	7	32	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	....	....	1	1	1	2	....	1	1	1	....	8
Miners' laborers,	....	....	....	....	....	....	1	....	....	2	....	....	3
Drivers and runners,	....	....	....	....	1	....	....	1	....	....	1	....	3
Doorboys and helpers,	....	....	....	....	....	....	....	....	....	....	....	1	1
Brakemen,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	....	....	....	2	2	1	3	1	1	3	2	1	16
Outside													
Laborers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Runners,	....	....	....	....	1	....	....	....	....	....	....	....	1
Brakemen,	....	....	....	....	1	....	....	....	....	....	....	....	1
Totals,	....	....	....	....	2	....	....	....	....	1	....	....	3
Grand totals inside and outside,	....	....	....	2	4	1	3	1	1	4	2	1	19

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1	1	3	1	....	....	....	....	1	3	1	3	13
Miners' laborers,	1	....	1	1	....	1	1	2	1	....	....	4	12
Drivers and runners,	....	....	2	....	....	....	....	....	1	....	....	....	3
Brakemen,	....	....	....	....	....	....	....	....	....	....	1	....	1
Carpenters,	....	....	....	....	....	....	....	....	....	1	....	....	1
Rope riders,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	3	1	6	2	....	1	1	2	3	3	2	7	31
Outside													
Headmen,	....	....	....	....	....	1	....	....	....	....	....	....	1
Totals,	....	....	....	....	....	1	....	....	....	....	....	....	1
Grand totals inside and outside,	3	1	6	2	....	2	1	2	3	3	2	7	32

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	....	....	1	....	....	....	....	....	....	....	1
English,	....	....	....	....	....	1	....	....	....	....	....	....	1
German,	....	....	....	1	....	....	....	....	....	....	....	....	1
Polish;	....	....	....	....	....	....	....	....	....	2	....	....	2
Italian,	....	....	....	....	1	....	....	....	1	1	....	1	4
Slavonian,	....	....	....	....	2	....	....	....	....	....	2	....	4
Austrian,	....	....	....	1	....	....	3	1	....	1	....	....	6
Totals,	...	....	....	2	4	1	3	1	1	4	2	1	19

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	....	....	....	....	....	....	....	....	1	1	....	2
English,	1	....	1	....	....	....	....	....	....	....	....	....	2
Welsh,	....	....	1	....	....	....	....	....	....	....	....	....	1
Irish,	....	....	....	....	....	1	....	....	....	....	....	....	1
Polish,	....	1	....	1	....	....	1	....	2	1	....	4	10
Italian,	1	....	1	....	....	1	....	1	....	1	....	2	7
Slavonian,	....	....	1	....	....	....	....	....	....	....	....	....	1
Austrian,	....	....	2	....	....	....	....	1	1	....	....	1	5
Russian,	1	....	....	1	....	....	....	....	....	....	1	....	3
Totals,	3	1	6	2	....	2	1	2	3	3	2	7	32

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Hillside Coal and Iron Co.																
Forest City Colliery:																
Number 2,	Shaft,	Non-gas.,	2 Fans,	18	5.	5.	70	1.		Steam,	..	4	55,930	51,096	59,612	166
				24	7.	7.	65	1.		Steam,	..	7	91,452	88,132	94,371	255
Clifford,	Shaft,	Non-gas.,	Fan,	18	5.	5.	80	1.	Guibal, ..	Steam,	..	6	90,422	85,115	92,395	296
Gray,	Slope,	Non-gas.,	Fan,	20	6.6	5.5	42	1.		Electricity,	..	4	51,584	46,316	52,128	163
Hudson Coal Co.																
Clinton Colliery:																
Clinton No. 3, Top vein,	Slope,	Non-gas.,	Fan,	17	4.	4.4	95	1.6		Electricity,	..	2	52,600	50,620	54,695	118
Clinton No. 3, Riverside,	Slope,	Non-gas.,	Fan,	20	5.	5.	75	1.4		Steam,	..	4	77,450	77,820	78,050	212
Clinton No. 5, Riverside,	Drift,	Non-gas.,	Fan,	10	2.5	2.5	112	.6	Guibal, ..	Steam,	..	1	27,500	26,675	28,500	51
Clinton No. 7, Riverside,	Drift,	Non-gas.,	Fan,	10	2.5	2.5	112	.5		Steam,	..	1	27,600	26,750	28,450	72
Clinton No. 10, Grassy,	Slope,	Non-gas.,	Fan,	20	5.	5.	75	.9		Electricity,	..	4	83,900	81,420	86,990	159
Scranton Coal Co.																
Ontario Colliery:																
Mountain,	Tunnel,	Non-gas.,	Fan,	14	4.	3.	90	.6				3	65,900	42,000	71,800	148
Sturgess,	Shaft,	Non-gas.,	Fan,	20	6.	6.3	65	1.2				4	72,150	65,400	81,100	230
Blue Ridge,	Shaft,	Non-gas.,	Fan,	15	4.	4.6	75	.5	Guibal, ...	Steam,		2	45,000	43,000	49,300	85
Klondike,	Tunnel,	Non-gas.,	Fan,	12	3.3	3.6	100	.7				3	49,000	39,400	55,500	133
Lackawanna Coal Co., Ltd.																
Lackawanna Colliery:																
Lackawanna,	Shaft,	Gaseous,	Fan,	20	5.	5.4	70	2.	Guibal, ...	Steam,	..	7	126,300	119,900	133,900	569
Lackawanna,	Shaft,	Gaseous,	Fan,	20	5.	5.4	70	2.								

Connell Anthracite Mining Co.																
Connell Colliery:																
Connell,	Drift,	Non-gas.,	Fan,	16	4.	4.	100	.2	Guibal,	Electricity,	..	5	84,000	66,200	84,000	341
Mt. Jessup Coal Co., Ltd.																
Mt. Jessup Colliery:																
Peck Shaft,	Shaft,	Gaseous,	Fan,	16	6.	4.8	120	2.	Guibal,	Steam,	..	6	52,500	46,000	70,000	200
North Pitch,	Shaft,	Gaseous,	Fan,	14	4.2	3.6	118	1.	Guibal,	Steam,	..	3	54,000	45,800	65,800	135
Surface,	Tunnel,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	15,000	10,000	*12,000	47
Surface,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	10,000	8,000	*8,000	21
Surface,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	10,000	7,000	*7,000	8
Moosic Mountain Coal Co.																
Marshwood Colliery:																
Marshwood,	Drift,	Non-gas.,	Fan,	1.1	3.4	2.10	120	2.	Home made,	Steam,	}	6	97,310	97,310	100,310	342
Marshwood,	Drift,	Non-gas.,	Fan,	1.8	3.	2.	135	2.	Stine,	Steam,	}					
Marshwood,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....						
Northern Anthracite Coal Co.																
Murray Colliery:																
Murray,	Shaft,	Non-gas.,	Fan,	16	5.	6.	85	1.6	Guibal,	Steam,	..	3	72,500	68,600	72,500	220
Temple Coal Co.																
Northwest Colliery:																
Northwest,	Drift,	Non-gas.,	Fan,	20	6.6	5.3	70	1.2	Guibal,	Electricity,	}	5	84,500	74,200	91,200	262
Northwest,	Slope,	Non-gas.,	Fan,	15	6.	4.6	90	1.2	Guibal,	Steam,	}					
O'Boyle-Foy Anthracite Coal Co.																
O'Boyle-Foy Colliery:																
O'Boyle-Foy,	Shaft,	Non-gas.,	Fan,	18	6.	6.	60	.9	Guibal,	Steam,	..	3	48,000	51,600	55,800	160
Dolph Coal Co., Limited																
Dolph Colliery:																
Dolph,	Drift,	Non-gas.,	Fan,	20	4.	6.	70	1.5	Guibal,	Steam,	}	2	29,755	58,390	58,410	60
Dolph,	Slope,	Non-gas.,	Fan,	20	4.	6.	70	1.5	Guibal,	Steam,	}					
Hannah Bell,	Slope,	Non-gas.,	Fan,	20	4.	6.	60	1.5	Guibal,	Steam,	..	2	29,500	59,600	63,000	45
Carbondale Coal Mining Co.																
Bolands Colliery:																
Bolands,	Slope,	Non-gas.,	Fan,	6	3.	1.2	220	.3	Guibal,	Steam,	..	2	28,000	28,000	28,000	80
Sacandaga Coal Co.																
Sacandaga No. 1 Colliery:																
Number 1, Top Vein,	Tunnel,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	9,500	8,100	9,500	38
Rock Slope,	Slope,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	1	1,000	1,000	1,000	4
Sacandaga No. 2 Colliery:																
Number 2,	3 Drifts,	Non-gas.,	Natural,	.....	.....	.....	.....	.....	.....	.....	..	..	†	†	†	

*Quantity variable; surface openings, robbing pillars. Considerable air is lost through cave holes.
†Three new drifts; none in more than 300 feet.

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total number of cubic feet of air per minute circulating in all the splits	Number of cubic feet of air per minute passing out at outlet	Number of persons employed inside
Clinton Falls Coal Co.																
Clinton Falls Colliery:																
Clinton Falls, ...	Drift, ...	Non-gas., .	Fan, ...	10	2.5	2.5	112	.5	Guibal, ...	Steam,.....	..	3	20,000	20,000	20,000	17
Wachna-Taylor Anthracite Coal Co.																
Wachna-Taylor Colliery:																
Wachna-Taylor, ...	Slope, ...	Non-gas., .	‡	.. ...	.....	.....	.....	.....	Guibal, ...	Steam,.....	..	1	18,000	18,000	20,500	22

‡Ventilated by O'Boyle-Foy Anthracite Coal Company, on Southwest Split.

TABLE 1.-- Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Hillside Coal and Iron Co. Forest City,	Susquehanna, ..	Joseph P. Jennings,..	Scranton, ...	H. E. R. Yewens, ..	Forest City, ...	Erie
Hudson Coal Co. Clinton, ... Clinton Washery, ...	Lackawanna, Wayne, Susquehanna,	C. C. Rose, ...	Scranton, ...	E. R. Pettebone, ...	Dorranceton, ...	D. and H.
Scranton Coal Co. Ontario, ... Ontario Washery, ...	Lackawanna, ..	W. L. Allen, ...	Peckville, ...	Daniel Young, Sr., Inside Supt. J. J. Aitkens, ... Outside Supt.	Scranton, ... Priceburg, ...	N. Y. O. and W.
Lackawanna Coal Co., Ltd. Lackawanna, ...	Lackawanna, ..	F. H. Hemelright, ..	Scranton, ...	Joseph Reese, ...	Olyphant, ...	D. L. and W. and Erie
Connell Anthracite Mining Co. Connell, ...	Sullivan, ...	W. L. Connell, ...	Scranton, ...	.....	.....	Lehigh Valley
Mt. Jessup Coal Co., Ltd. Mt. Jessup, ...	Lackawanna, ..	.....	.....	John T. Cartwright, .	Peckville, ...	D. L. and W., N. Y. O. and W., Erie and D. and H.
Moosic Mountain Coal Co. Marshwood, ...	Lackawanna, ..	Charles P. Ford, ...	Marshwood, ...	Charles P. Ford, ...	Marshwood, ...	D. L. and W.
Northern Anthracite Coal Co. Murray, ...	Sullivan, ...	M. J. Murray, Sr., ..	Dunmore, ...	J. F. Flannely, ...	Lopez, ...	Lehigh Valley
Temple Coal Co.* Northwest, ...	Lackawanna, ..	F. H. Hemelright, ..	Scranton, ...	Tudor J. Aston, ...	Simpson, ...	N. Y. O. and W. and Erie
O'Boyle-Foy Anthracite Coal Co. O'Boyle-Foy, ...	Sullivan, ...	M. W. O'Boyle, ...	Pittston, ...	M. J. Clemons, ...	Murray, ...	Lehigh Valley
Dolph Coal Co., Ltd. Dolph, ...	Lackawanna, ..	W. G. Robertson, ..	Scranton, ...	W. G. Robertson, ..	Scranton, ...	Erie

*Formerly Northwest Coal Co.

TABLE 1—Continued

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Carbondale Coal Mining Co. Bolands,	Lackawanna,	John J. Boland,	Carbondale,			D. and H.
Sacandaga Coal Co. Sacandaga No. 1, Sacandaga No. 2,†	Lackawanna,	E. H. Leaning,	Scranton,	John A. Hines,	Carbondale,	D. and H.
Clinton Falls Coal Co. Clinton Falls,	Wayne,	J. W. Costelle,	Carbondale,	D. P. Pace,	Scranton,	N. Y. O. and W.
Wachna-Taylor Anthracite Coal Co. Wachna-Taylor,	Sullivan,	E. J. Taylor,	Mildred,	E. J. Taylor,	Mildred,	Lehigh Valley

†New colliery

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Hillside Coal and Iron Co.													
Forest City,	Susquehanna, ..	504,976	41,770	10,662	557,408	283	1,539	5	2	535,575	120,251	29,000	87
Hudson Coal Co.													
Clinton,	Lackawanna, Wayne,	394,424	23,445	3,998	421,867	277	804	2	6	300,625	77,635	.....	86
Clinton Washery,	Susquehanna, ..	30,314	.....	.....	30,314	39		.....	.....	.....	.....	.....	....
Totals,	.....	424,738	23,445	3,998	452,181	.....	804	2	6	300,625	77,635	.....	86
Scranton Coal Co.													
Ontario,	Lackawanna, ..	296,513	58,137	2,812	357,462	233	991	3	4	184,000	237,135	.....	110
Ontario Washery,	Lackawanna, ..	34,543	15,500	.....	50,043	73	50	.....	.....	.....	.....	.....	....
Totals,	.....	331,056	73,637	2,812	407,505	.....	1,041	3	4	184,000	237,135	.....	110
Lackawanna Coal Co., Limited													
Lackawanna,	Lackawanna, ..	304,504	31,543	10,929	346,976	282	731	2	5	388,600	69,575	.....	28
Connell Anthracite Mining Co.													
Connell,	Sullivan, ...	282,944	36,500	3,624	323,068	281	501	.....	2	100,200	26,629	.....	9
Mt. Jessup Coal Co., Limited													
Mt. Jessup,	Lackawanna, ..	230,613	22,849	6,860	260,322	282	693	4	3	149,625	67,600	24,355	46

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of permissible explosives used	Number of horses and mules
Moosic Mountain Coal Co. Marshwood,	Lackawanna, ..	183,781	18,126	2,057	203,964	265	395	3	3	118,125	110,300	.....	49
Northern Anthracite Coal Co. Murray,	Sullivan, ...	166,435	5,000	3,516	174,951	211	300	.....	.....	126,000	2,500	.....	30
Temple Coal Co. Northwest,	Lackawanna, ..	149,286	7,513	972	157,771	244	351	.....	2	138,575	140,385	.....	43
O'Boyle-Foy Anthracite Coal Co. O'Boyle-Foy,	Sullivan, ...	62,801	7,300	1,042	71,143	163	232	.....	2	140,250	11,800	.....	20
Dolph Coal Co., Limited Dolph,	Lackawanna, ..	42,588	15,000	895	58,483	78	423	.....	1	73,625	6,450	.....	34
Carbondale Coal Mining Co. Bolands,	Lackawanna, ..	12,285	3,650	12,484	28,419	195	122	.....	.....	38,625	3,700	.....	14
Sacandaga Coal Co. Sacandaga No. 1,	Lackawanna, ..	10,328	795	2,059	13,182	255	82	.....	1	32,350	2,898	.....	5
Sacandaga No. 2,	Lackawanna, ..	1,332	50	.....	1,382	57	33	.....	.....	300	107	.....	3
Totals,	.....	11,660	845	2,059	14,564	.....	115	.....	1	32,650	3,005	.....	8
Clinton Falls Coal Co. Clinton Falls,	Wayne, ...	7,340	3,600	2,500	13,440	154	57	.....	1	19,250	100	.....	6
Wachna-Taylor Anthracite Coal Co. Wachna-Taylor,	Sullivan, ...	4,479	1,000	118	5,597	117	30	.....	.....	6,450	300	.....	4
Grand totals,	.....	2,719,486	291,778	64,528	3,075,792	.....	7,334	19	32	2,352,175	877,365	53,855	574

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos, and air compressors in use, etc.

Names of Operators	County	Number of Boilers					Locomotives				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Gasoline	Steam	Air	Electric							
Hillside Coal and Iron Co.,	Susquehanna,	.....	.....	31	3,740	3,740	.....	5	....	17	45	3,500	7	4,000	2,000	6	1
Hudson Coal Co.,	Lackawanna,	.....	.....	5	1,325	1,325	.....	1	....	3	40	1,760	7	4,200	1,400	1	.....
	Wayne, ...																
Scranton Coal Co.,	Lackawanna,	25	500	12	1,100	1,600	.....	4	....	2	43	2,536	7	2,980	2,000	1	.....
Lackawanna Coal Co., Ltd.,	Lackawanna,	.....	.....	10	2,310	2,310	.....	2	....	9	21	2,530	5	8,500	4,800	3	.....
Connell Anthracite Mining Co.,	Sullivan,	.....	.....	6	1,600	1,600	.....	.....	....	12	10	1,530	2	800	700	4	.....
Mt. Jessup Coal Co., Ltd.,	Lackawanna,	.....	.....	12	2,940	2,940	.....	3	....	.....	17	850	4	3,300	1,600	.....	2
Moosic Mountain Coal Co.,	Lackawanna,	.....	.....	5	375	375	.....	1	....	.....	4	115	.....	.....	.....	.....	1
Northern Anthracite Coal Co.,	Sullivan,	.....	.....	5	450	450	3	.....	....	.....	5	400	3	3,150	1,700	.....	.....
Temple Coal Co.,	Lackawanna,	.....	.....	4	900	900	.....	2	....	.....	18	1,250	.....	.....	.....	1	2
O'Boyle-Foy Anthracite Coal Co.	Sullivan,	.....	.....	2	550	550	.....	.....	....	.....	14	525	3	200	180	.....	.....
Dolph Coal Co., Ltd.,	Lackawanna,	.....	.....	13	2,320	2,320	.....	3	....	4	35	1,755	5	1,980	1,000	3	3
Carbondale Coal Mining Co.,	Lackawanna,	.....	.....	4	350	350	.....	.....	....	.....	7	165	1	260	100	.....	1
Sacandaga Coal Co.,	Lackawanna,	.....	.....	2	250	250	.....	2	....	.....	.....	.....	1	200	200	.....	1
Clinton Falls Coal Co.,	Wayne,	1	125	.....	.....	125	.....	2	....	.....	2	32	.....	.....	.....	.....	.....
Wachna-Taylor Anthracite Coal Co.,	Sullivan,	.....	.....	1	80	80	.....	.....	....	.....	2	65	1	200	200	.....	.....
Totals,		26	625	112	18,290	18,915	3	25	....	47	263	17,013	46	29,770	15,880	19	11

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Hillside Coal and Iron Co.,	Susquehanna,	3	9	....	433	455	67	29	7	106	95	1,204	1	1	25	34	57	20	3	194	335	1,539
Hudson Coal Co.,	Lackawanna, Wayne, Susquehanna,	1	4	....	197	215	89	32	11	52	15	616	..	1	6	28	13	33	2	105	188	804
Scranton Coal Co.,	Lackawanna,	1	4	....	244	222	94	6	12	....	64	647	..	2	21	49	79	66	3	174	394	1,041
Lackawanna Coal Co., Ltd.,	Lackawanna,	2	3	5	173	210	20	12	10	56	78	569	1	1	23	19	....	23	5	90	162	731
Connell Anthracite Mining Co.,	Sullivan,	1	1	....	151	78	....	4	9	35	62	341	1	1	9	12	18	28	5	86	160	501
Mt. Jessup Coal Co., Ltd.,	Lackawanna,	1	1	8	127	165	48	9	10	42	...	411	1	3	21	27	96	25	3	106	282	693
Moosic Mountain Coal Co.,	Lackawanna,	2	1	....	147	120	35	9	....	24	4	342	1	1	8	12	....	....	2	29	53	395
Northern Anthracite Coal Co.,	Sullivan,	1	....	....	75	75	37	5	1	16	10	220	1	1	5	6	18	29	3	17	80	300
Temple Coal Co.,	Lackawanna,	2	....	....	100	102	23	6	3	10	16	262	1	1	7	8	....	20	2	50	89	351
O'Boyle-Foy Anthracite Coal Co.,	Sullivan,	1	....	....	70	50	10	7	3	17	3	161	1	..	3	6	21	6	1	33	71	232
Dolph Coal Co., Ltd.,	Lackawanna,	2	2	....	120	75	21	....	3	23	8	254	1	1	11	19	39	13	4	81	169	423
Carbondale Coal Mining Co.,	Lackawanna,	1	....	....	32	30	10	1	....	5	1	80	1	1	2	7	7	5	2	17	42	122
Sacandaga Coal Co.,	Lackawanna,	2	....	....	23	41	10	....	1	6	....	83	1	1	3	6	2	....	2	17	32	115
Clinton Falls Coal Co.,	Wayne,	1	1	....	16	9	7	....	....	2	....	36	1	..	1	2	5	....	1	11	21	57
Wachna-Taylor Anthracite Coal Co.	Sullivan,	1	....	....	17	.....	3	....	....	1	....	22	1	..	1	3	....	2	1	.....	8	30
Totals,		22	26	13	1,925	1,847	474	120	70	395	356	5,248	13	15	146	238	355	270	39	1,010	2,086	7,334

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked Monthly												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Hillside Coal and Iron Co.,	Susquehanna,	26	20	22	19	25	25	26	25	24	26	20	25	283
Hudson Coal Co.,	Lackawanna, Wayne,	24	19	19	24	24	23	23	24	25	25	22	26	277
Scranton Coal Co.,	Lackawanna,	19	15	19	19	20	21	21	20	19	20	19	21	233
Lackawanna Coal Co., Limited,	Lackawanna,	26	23	24	21	25	26	26	23	22	23	21	22	282
Connell Anthracite Mining Co.,	Sullivan,	25	21	22	24	24	24	20	24	24	27	23	23	281
Mt. Jessup Coal Co., Limited,	Lackawanna,	23	22	24	22	21	25	22	25	25	25	23	25	282
Moosic Mountain Coal Co.,	Lackawanna,	24	19	20	17	18	24	21	24	24	26	23	25	265
Northern Anthracite Coal Co.,	Sullivan,	22	20	20	21	13	13	10	14	21	19	17	21	211
Temple Coal Co.,	Lackawanna,	22	19	19	19	20	21	20	23	21	21	19	20	244
O'Boyle-Foy Anthracite Coal Co.,	Sullivan,	16	15	12	16	13	9	9	12	17	15	12	17	163
Dolph Coal Co., Limited,	Lackawanna,	14	13	14	.....	.....	.....	.....	.....	.....	13	11	13	78
Carbondale Coal Mining Co.,	Lackawanna,	25	24	25	23	12	.....	.....	.....	21	20	21	24	195
Sacandaga Coal Co.,	Lackawanna,	22	19	18	16	22	25	25	26	9	26	24	23	255
Clinton Falls Coal Co.,	Wayne,	.....	.....	.....	20	20	22	.....	.....	21	23	23	25	154
Wachna-Taylor Anthracite Coal Co.,	Lackawanna,	24	20	9	.....	.....	.....	.....	.....	9	20	19	16	117

TABLE 4.—Fatal accidents inside and outside of mines

Date		Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
April	21	William Ghen, ...	German, ...	Brakeman,	18	S.	....	...	Lackawanna, ...	Lackawanna, ..	Killed by cars on gangway.
	30	Joseph Gerchman, ..	Austrian, ...	Miner, ...	34	M.	1	8	Forest City, ...	Susquehanna, ..	Killed by fall of coal at face of chamber.
May	7	Vincent Scaramutch,	Italian, ...	Miner, ...	29	S.	....	....	Marshwood, ...	Lackawanna, ..	Killed by explosion of blast at face of chamber.
	9	Frank Hogetts, ...	American, ..	Brakeman,	27	S.	....	....	Mt. Jessup, ...	Lackawanna, ..	Killed by cars while attempting to make a flying switch. Outside.
	16	George Cholish, ...	Slavonian, .	Driver, ...	18	S.	....	....	Mt. Jessup, ...	Lackawanna, ..	Killed by cars on gangway.
	18	Andrew Steiner, ...	Slavonian, .	Runner, ...	19	S.	....	....	Marshwood, ...	Lackawanna, ..	Killed by cars while on way home from work. Outside.
June	23	James Curtis, ...	English, ...	Miner, ...	45	M.	1	5	Mt. Jessup, ...	Lackawanna, ..	Killed by fall of roof on pillar work.
July	6	Ignots Grablotz, ...	Austrian, ...	Laborer, ..	30	M.	1	3	Clinton, ...	Lackawanna, ..	Killed by fall of roof at face of chamber.
	10	John Kotzovic, ...	Austrian, ...	Miner, ...	26	M.	1	....	Lackawanna, ...	Lackawanna, ..	Killed by fall of roof at face of chamber.
	20	John Swartz, ...	Austrian, ...	Miner, ...	42	M.	1	2	Clinton, ...	Lackawanna, ..	Killed by fall of roof at face of chamber.
Aug.	5	John Brockley, ...	Austrian, ...	Driver, ...	17	S.	....	....	Mt. Jessup, ...	Lackawanna, ..	Killed by being kicked by mule on gangway.
Sept.	16	Frank Fatiga, ...	Italian, ...	Miner, ...	28	S.	....	....	Ontario, ...	Lackawanna, ..	Killed by explosion of blast at face of chamber.
Oct.	6	Felix Bothol, ...	Austrian, ...	Laborer, ..	52	M.	1	...	Forest City, ...	Susquehanna, ..	Killed by railroad cars under breaker. Outside.
	7	Edward Protovitch, ..	Polish, ...	Laborer, ..	30	S.	....	....	Ontario, ...	Lackawanna, ..	Killed by explosion of blast in cross-cut.
	12	Baldo Saldi, ...	Italian, ...	Miner, ...	43	S.	....	....	Marshwood, ...	Lackawanna, ..	Killed by fall of roof at face of chamber.
	20	Joseph Vilchesky, ...	Polish, ...	Laborer, ..	19	S.	....	....	Forest City, ...	Susquehanna, ..	Killed by fall of roof on pillar work.
Nov.	12	Michael Smith, ...	Slavonian, .	Runner, ...	18	S.	....	....	Forest City, ...	Susquehanna, ..	Killed by fall of roof on gangway.
	25	Michael Bossick, ...	Slavonian, .	Miner, ...	44	M.	1	4	Ontario, ...	Lackawanna, ..	Killed by fall of roof 25 feet from face of airway.
Dec.	18	Joseph Ventavana, ..	Italian, ...	Doortender,	50	S.	....	....	Forest City, ...	Susquehanna, ..	Killed by cars on gangway.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 17	Anthony Typiska, ...	Russian, ...	Laborer, ...	27	S.	Ontario, ...	Lackawanna, ..	Foot bruised by piece of coal rolling on it in chamber.
28	Romel Tubvi, ...	Italian, ...	Miner, ...	24	M.	Connell, ...	Sullivan,.....	Head bruised by explosion of dynamite at face of chamber.
31	John Dixon, ...	English, ...	Rope rider, ...	29	M.	Marshwood, ...	Lackawanna, ..	Thigh fractured by cars on slope.
Feb. 13	John Magulski, ...	Polish, ...	Miner, ...	27	M.	Clinton, ...	Lackawanna, ..	Arm fractured by fall of coal at face of chamber.
March 5	Peter Simorcella, ...	Italian, ...	Miner, ...	36	M.	O'Boyle-Foy, ...	Sullivan,.....	Back broken by fall of roof on gangway.
	Thomas Paban, ...	Austrian, ...	Laborer, ...	40	S.			Knee injured.
9	Thomas W. Bailey, ..	Welsh, ...	Driver, ...	18	S.	Clinton, ...	Lackawanna, ..	Hip dislocated by cars on gangway.
25	George Rasko, ...	Austrian, ...	Miner, ...	45	M.	Ontario, ...	Lackawanna, ..	Skull fractured by explosion of blast at face of chamber.
	George Dando, ...	English, ...	Miner, ...	55	M.	Ontario, ...	Lackawanna, ..	Hip bruised by cars on gangway.
27	Andrew Markola, ...	Slavonian. .	Driver, ...	18	S.	Forest City, ...	Susquehanna, ..	Leg fractured by fall of coal on pillar work.
April 21	John Bucknavage, ..	Polish, ...	Miner, ...	48	M.	Northwest, ...	Lackawanna, ..	Leg fractured by fall of coal at face of chamber.
	Adam Timrak, ...	Russian, ...	Laborer, ...	23	S.	Northwest, ...	Lackawanna, ..	Shoulder and hip dislocated by fall of coal in chamber.
June 10	Anthony Falanda, ...	Italian, ...	Laborer, ...	28	S.	Sacandaga No. 1, .	Lackawanna, ..	Thumb and toe fractured by fall of roof at face of chamber.
11	Michael Sweeney, ...	Irish, ...	Headman, ...	28	M.	Mt. Jessup, ...	Lackawanna, ..	Shoulder blade broken by being struck by a plank. Outside.
July 20	Paul Shaloski, ...	Polish, ...	Laborer, ...	48	M.	Ontario, ...	Lackawanna, ..	Chest injured by fall of roof at face of chamber.
Aug. 18	Michael Mitrovick, ..	Austrian, ...	Laborer, ...	44	M.	Clinton, ...	Lackawanna, ..	Leg fractured by fall of roof at face of chamber.
25	Aneclets Boluchi, ...	Italian, ...	Laborer, ...	51	M.	Marshwood, ...	Lackawanna, ..	Shoulder and ribs fractured by fall of roof at face of chamber.
Sept. 17	Paul Mazeleski, ...	Polish, ...	Laborer, ...	32	M.	Clinton, ...	Lackawanna, ..	Arm fractured by fall of roof at face of chamber.
26	Edward Petrofski, ..	Polish, ...	Miner, ...	36	M.	Connell, ...	Sullivan,.....	Four ribs fractured by cars at face of chamber.
28	Joseph Opicka, ...	Austrian, ...	Driver, ...	19	S.	Forest City, ...	Susquehanna, ..	Leg fractured by cars on gangway.

TABLE 5—Continued

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 6	George Travis, ...	American, ..	Carpenter, ...	44	M.	Lackawanna, ...	Lackawanna, ..	Chest injured by piece of timber falling on him on the gangway.
27	Robert Semnipole, ...	Italian, ...	Miner, ...	28	S.	Mt. Jessup, ...	Lackawanna, ..	Back injured by fall of roof at face of chamber.
31	Andrew Rose, ...	Polish, ...	Miner, ...	44	M.	Clinton Falls, ...	Wayne, ...	Leg fractured by prop at face of chamber.
Nov. 3	Nick Rusin, ...	Russian, ...	Miner, ...	45	M.	Dolph, ...	Lackawanna, ..	Hand bruised by fall of roof at face of chamber.
16	James Corcoran, ...	American, ..	Brakeman, ...	22	S.	Lackawanna, ...	Lackawanna, ..	Hand bruised by cars on gangway.
Dec. 8	William Predenete, ..	Italian, ...	Miner.	47	M.	Mt. Jessup, ...	Lackawanna, ..	Shoulder and arm bruised by cars on pillar work.
12	Michael Marinski, ..	Polish, ...	Laborer, ...	37	M.	Clinton, ...	Lackawanna, ..	Hand lacerated by fall of coal at face of chamber.
19	Alexander Malinoski,	Polish, ...	Miner, ...	36	M.	Marshwood, ...	Lackawanna, ..	Shoulder injured by fall of roof at face of chamber.
	Anthony Zeleznaker,	Austrian, ...	Laborer, ...	47	M.	Clinton, ...	Lackawanna, ..	Back injured by fall of roof at face of chamber.
22	Joseph Kinecka, ...	Polish, ...	Miner, ...	55	M.	Lackawanna, ...	Lackawanna, ..	Arm fractured by explosion of blast at face of chamber.
	Joseph Chilotski, ...	Polish, ...	Laborer, ...	23	M.	Lackawanna, ...	Lackawanna, ..	Arm fractured by explosion of blast at face of chamber.
28	Anthony Vergari, ...	Italian, ...	Laborer, ...	31	M.	Lackawanna, ...	Lackawanna, ..	Collar bone fractured by cars on plane.

CONDITION OF COLLIERIES

HILLSIDE COAL AND IRON COMPANY

Forest City.—Ventilation, drainage and condition as to safety, good.

HUDSON COAL COMPANY

Clinton.—Ventilation, drainage and condition as to safety, good.

SCRANTON COAL COMPANY

Ontario.—Ventilation, drainage and condition as to safety, good.

LACKAWANNA COAL COMPANY, LIMITED

Lackawanna.—Ventilation, drainage and condition as to safety, good.

CONNELL ANTHRACITE MINING COMPANY

Connell.—Ventilation, drainage and condition as to safety, good.

MT. JESSUP COAL COMPANY, LIMITED

Mt. Jessup.—Ventilation, drainage and condition as to safety, good.

MOOSIC MOUNTAIN COAL COMPANY

Marshwood.—Ventilation, drainage and condition as to safety, good.

NORTHERN ANTHRACITE COAL COMPANY

Murray.—Ventilation, drainage and condition as to safety, good.

TEMPLE COAL COMPANY

Northwest.—Ventilation, drainage and condition as to safety, good.

O'BOYLE-FOY ANTHRACITE COAL COMPANY

O'Boyle-Foy.—Ventilation, drainage and condition as to safety, good.

DOLPH COAL COMPANY, LIMITED

Dolph.—Ventilation, drainage and condition as to safety, good.

CARBONDALE COAL MINING COMPANY

Bolands.—Ventilation, drainage and condition as to safety, fair.

SACANDAGA COAL COMPANY

Sacandaga Nos. 1 and 2.—Ventilation, drainage and condition as to safety, fair.

CLINTON FALLS COAL COMPANY

Clinton Falls.—Ventilation, drainage and condition as to safety, good.

WACHNA-TAYLOR ANTHRACITE COAL COMPANY

Wachna-Taylor.—Ventilation and condition as to safety, good.

IMPROVEMENTS

HILLSIDE COAL AND IRON COMPANY

Forest City Colliery.—Two additional locomotive boilers were added to the breaker fire room. At the Gray slope a wash house, oil house and powder house were completed. An electric air compressor was added to the equipment. A hospital was built inside, a bore hole 10 inches in diameter was drilled from the surface to the bottom vein for pumping purposes. At No. 2 shaft a pair of first motion engines was installed and coal is now being hoisted from the Dunmore vein to the surface. The shaft was cribbed with concrete from the surface to the rock. Also installed a new centrifugal pump, electrically driven, having a capacity of 1,000 gallons per minute.

SACANDAGA COAL COMPANY

Sacandaga No. 1 Colliery.—New pockets on breaker, with capacity of 300 tons, were installed, and a new office and supply house completed. A rock tunnel slope was sunk to the Bottom Dunmore vein, and an air shaft sunk to Top Dunmore vein. An air shaft was also sunk to the Bottom Dunmore vein. An outside plane 1,600 feet long, connecting with two miles of railroad to the new No. 2 colliery, was completed.

Sacandaga No. 2 Colliery.—Completed balance plane 400 feet. Drove a number of openings and started to open up the water level gangway across the foot of the property, which will probably extend 4,000 feet. Completed a new concrete powder magazine according to DuPont specifications, a new barn, and a large sized shifting shanty for the company men.

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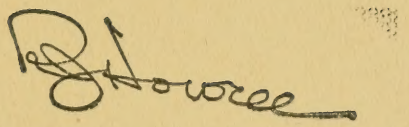
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